104 年度第八屆第二次會員大會暨第 43 次學術演講會 目錄

理事長序

第八屆理事長 黃志賢醫師

各位會員女士先生，志賢接任本學會第八任理事長一年以來，承蒙各位會員的熱情支持，以及理監事及秘書處諸位賢達夥伴勞心勞力的付出，讓本學會各項業務都能順利推展。

本次年會有幾項重要的事項在此向各位會員報告。首先是有六位資深會員榮陞榮譽會員，將於會員大會接受大家的致意。其次是學術委員會對本次年會論文獎與學術投稿摘要的審查評選，選出江萬煊教授傑出研究論文獎、男性學成就獎、男性學論文獎等，對於學術委員的辛勞表示敬意與謝意。此外，對於優秀年輕醫師投身於男性學研究，我們特別募集基金成立年輕醫師補助辦法，用以鼓勵肯定年輕的醫師，再接再厲，一同耕耘這塊屬於大家的園地。

本次年會也將頒發獎座感謝前理事長簡邦平教授與秘書長蔡維恭醫師在其任期對學會的貢獻。

本學會全新更新的網站已於 3 月 1 日正式上線服務，在原網站基礎上，再加強查詢的方便性、互動性與訊息的更新，期待大家多加利用，並提出再改善的意見。還有各大男性學相關廠商秉於回饋社會、贊助公益的理念，對於本學會年會、學術研討會以及 SDACT 的慷慨贊助，是支持本學會會務興盛的一個關鍵因素，在此致上懇切的謝忱。

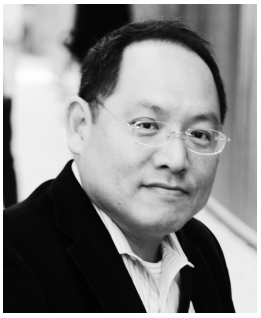
值得再提的是台灣性功能障礙諮詢暨訓練委員會（台灣 SDACT 委員會）於去年 12 月選出第八屆新的主任委員與秘書長，分別由黃世聰醫師及陳煜醫師擔任，相信新的團隊即將帶出一番新的氣象，對於民眾衛教、醫事類同仁的新知升級等重要工作持續發揚，為本學會的社會教育功能發揮更高的效能。

本次年會由馬偕醫院團隊接辦，謝謝榮譽會長林文榮醫師及團隊的努力，選擇在淡水漁人碼頭福容飯店舉行，籌畫期間經過多次會議的策劃，細心安排活動各個細節，期能帶給各位會員全新的感受，在豐富的學術饗宴之外，更讓大家能沉浸在一個歷史人文的氛圍中，順著馬偕博士奉獻行醫的足跡，想像早期台北從淡水河流域發祥的軌跡。

最後，值此羊年新春時節，志賢僅代表秘書處與理監事會全體祝福大家今年都能三陽開泰、洋洋得意、心想事成、身體健康！

理事長 黃志賢 於 2015 年 3 月 7 日

大會會長序



親愛的會員們：

歡迎來淡水～

淡水是馬偕博士在台灣首次登陸行醫的地方，也是北台灣第一所西醫院所～偕醫館創建所在地。今年承蒙學會理監事會決議讓馬偕泌尿科來承辦此次男性學年度大會，我們特別安排在淡水漁人碼頭的福容飯店來舉辦大會，希望讓會員可以在風光明媚的地點享受這學術的盛宴和會員的交流。也希望藉這個機會讓大家可以來拜訪美麗的淡水小鎮，尋訪馬偕博士的蹤跡與風采。

感謝學會給予我們這個機會，雖然這是馬偕泌尿科首次承辦學會的年會。但在大會榮譽會長林文榮主任大力支持下，全科同仁都以萬分期待，全力以赴的態度，希望能完成這次任務。我要特別感謝學會黃志賢理事長在大會規劃上給予的指引和建議。謝謝廖俊厚秘書長、學術委員會黃世聰主委和不孕症小組吳建志主委精心規劃了豐富的學術議程，相信可以帶給大家精采而多面向的專業收穫。更感謝學會秘書何秀珠小姐不餘遺力的協助大會的事務和推動。台灣男性學醫學會是大家共有的，諸多會員和講師這次熱心的投稿和參與，更豐富了此次會議在學術上的廣度和深度，在此特別感謝大家。

這也是台灣男性學醫學會年度大會首次在北海岸舉行，淡水和周遭北海岸地區具有豐富的觀光資源，淡水本身亦為先民開拓台灣的重要據點，因歷史淵源也富有西方文化和殖民色彩。大會特別安排在 3 月 7 日黃昏為會員提供了免費的淡水河遊船活動，讓大家欣賞聞名的淡江夕照和淡水夜景，歡迎會員和家眷共同來參與。更歡迎大家在沐春三月來淡水走走，感受水岸風情和老街人文，來趟自然、傳統、美食的輕旅行，體驗淡水小鎮的慢活魅力。

大會會長 馬偕泌尿科
蔡維恭醫師 謹上
民國一〇四年三月七日

大會注意事項

壹、論文發表

一、(1)分一般論文及論文獎口頭發表兩組。
(2)每題演講及討論共10分鐘，7分鐘時第一聲鈴響，8分鐘時第二聲鈴響並開燈，演講即應結束，隨即討論2分鐘。
(3)敬請演講者嚴格遵守，謝謝合作。

二、外賓特別演講
每題演講及討論共30分鐘；20分鐘時第一聲鈴響，隨即討論10分鐘。

三、如果演講未結束，請座長提醒演講者時間已到。如演講時間已到，即開燈結束演講並省略討論。

四、敬請各座長嚴格控制演講及討論時間，以利節目進行。

貳、一般事項

一、報到
報到時間：3 月 7 日上午 8 時 00 分至下午 16 時 00 分止。
3 月 8 日上午 8 時 00 分至上午 11 時 00 分止。
報到地點：福容大飯店二樓團圓廳。

二、會員大會
3 月 7 日 12:00 至 12:20 於 2 樓吉祥廳舉行，敬請會員踴躍參加。

三、理監事聯席會議
於3月8日（星期日）中午12:30時起假福容大飯店阿基師餐廳進行第八屆第四次理監事聯席會議。

四、醫療商品展示
會議期間各參展廠商將於二樓團圓廳舉辦醫療商品展示，歡迎參觀。

五、午餐供應
敬請與會人員憑名牌於吉祥廳外兌換午餐餐盒，並於吉祥廳內同時進行 Lunch Symposium。歡迎會員踴躍出席，共襄盛舉。

六、交通資訊
淡水漁人碼頭福容大飯店（新北市淡水區觀海路 83 號）。

- 開車路線：

1. 國道一號（中山高）→由重慶北路交流道下（往士林方向），過百齡橋→（左轉）承德路經過士林、石牌、北投，轉至大度路，過關渡，

經竹圍、紅樹林、(左前方續行)往中正東路(台 2 乙省道)，經淡水市區，在沙崙路口左轉依指標往漁人碼頭方向即可抵達。

2. 假日如遇淡水市區車潮擁擠,也可在紅樹林繼續直行登輝大道(台 2 省道)至新市一路左轉，右轉中山北路二段接左轉濱海路，續行至海洋學院前左轉回中正路二段,至觀海路右轉循指標即可到達。另可走國道 1 號(中山高速公路)從五股下交流道，接 107 號縣道、103 號縣道、台 15 號省道(濱海公路)至八里，過關渡大橋，經竹圍、紅樹林、淡水市區，往漁人碼頭方向即可抵達。

● 捷運：

搭乘台北捷運淡水線(紅色 2 號線)，往淡水方向於終點站淡水站下車，轉乘公車「R26」路線至終點站漁人碼頭站下車即可抵達本飯店或於淡水捷運站轉搭大會接駁車。

● 公車：

指南客運 R26(漁人碼頭-淡水捷運站)車班最多，假日尖峰約 3-5 分鐘一班。
指南客運 836(漁人碼頭-淡水捷運站)。
三重客運 R23(漁人碼頭-紅樹林捷運站-竹圍捷運站)。

● 鐵路、高鐵：

台北車站下車，轉乘台北捷運淡水線(紅色 2 號線)，往淡水方向於終點站淡水站下車，轉乘公車「R26」路線或大會接駁車至終點站漁人碼頭站下車即可抵達本飯店。

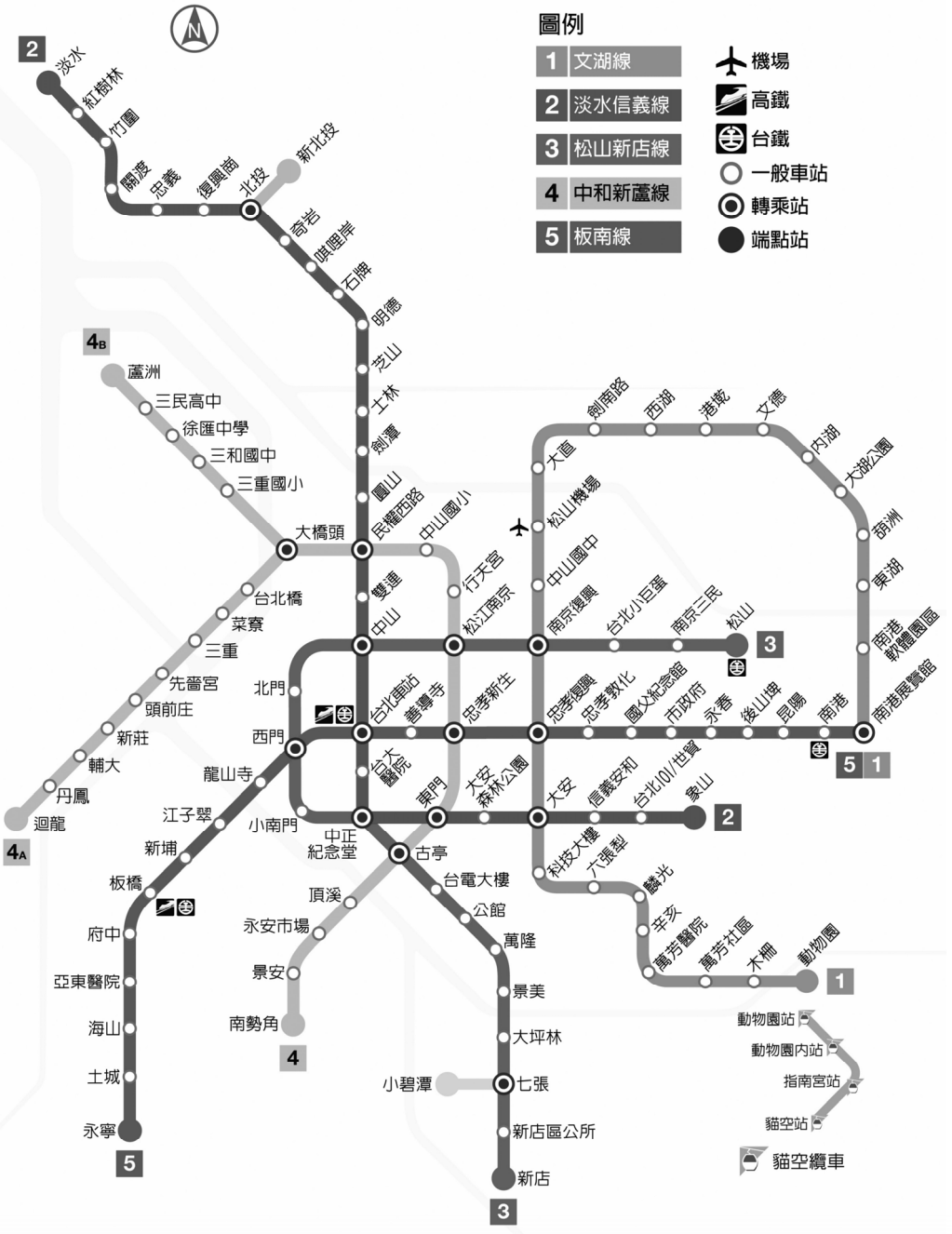
● 停車服務：

飯店停車場每小時收取停車費 40 元，大會報名會員提供免費停車服務，房客請停飯店地下停車場，未住房會員請停飯店外平面停車場。

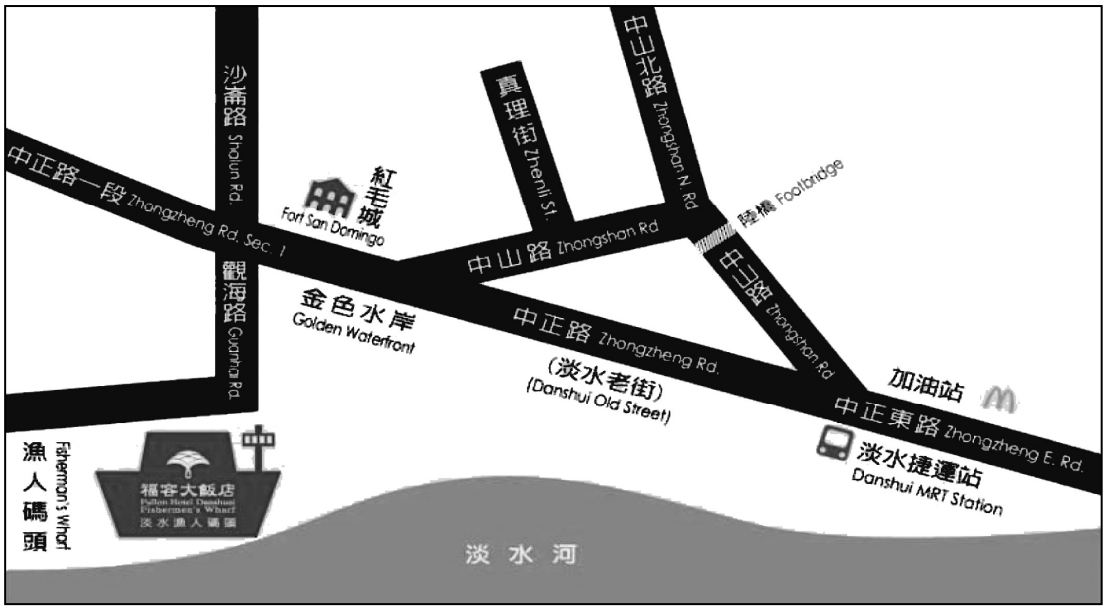
● 2015 年 3 月 7 日（星期六）淡海黃昏遊船：

集合時間及地點：下午五點（團圓廳門口）。參加醫師及家眷，敬請遵從現場人員指引至碼頭搭乘遊艇。
登　　船　　處：漁人碼頭。
貼 心 小 叮 嚀：淡水河出海口冬日風勢較大，參加者備妥禦寒衣物。

交通示意圖 – 台北捷運路線圖



福容漁人碼頭交通資訊 與 大會接駁車時刻表



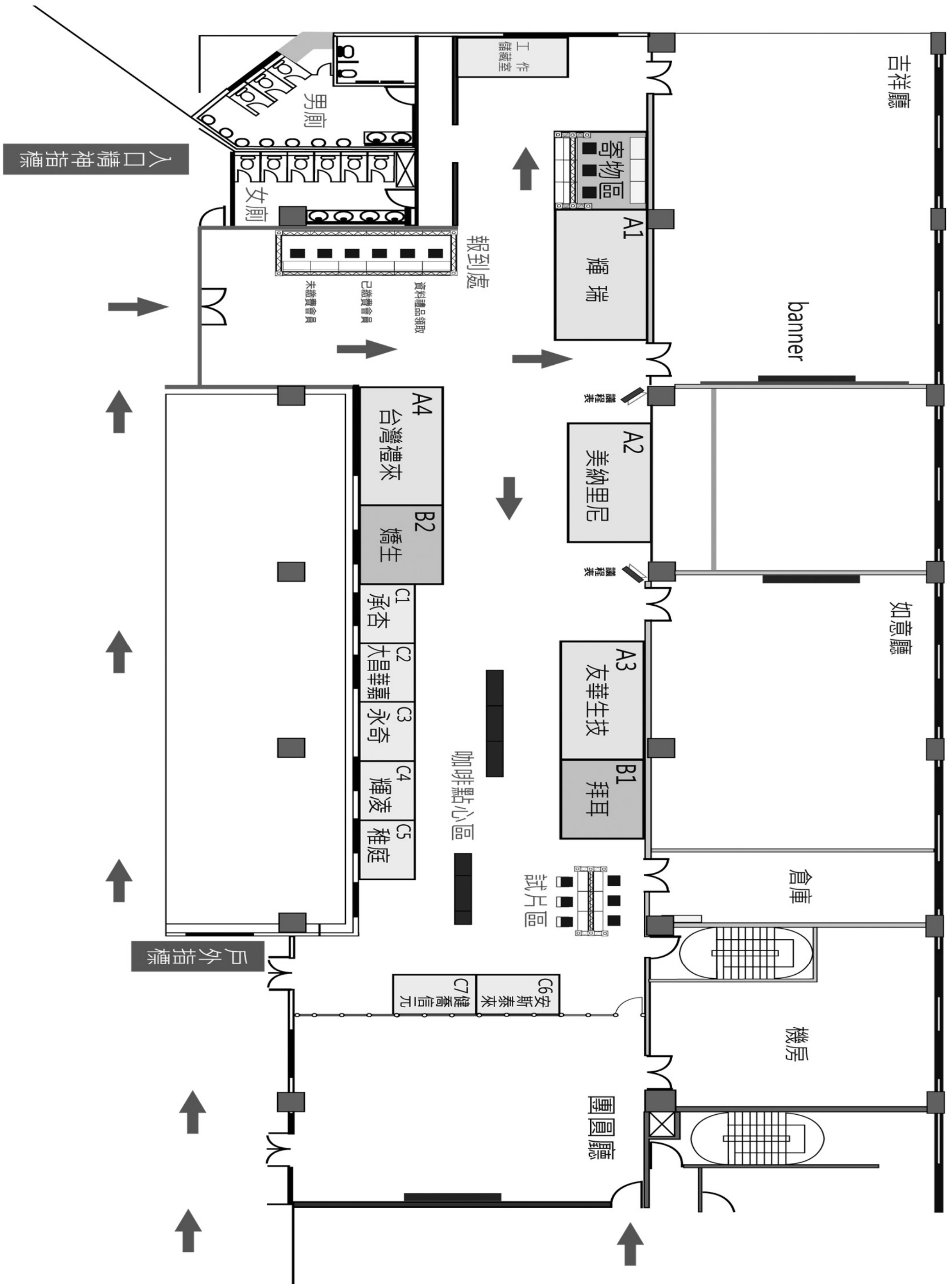
接駁車服務 淡水捷運站→淡水漁人碼頭福容大飯店

候車地點 請在淡水捷運 **2** 號出口搭乘（將舉牌提示）

2015/03/07 淡水捷運站 2 號出口發車至飯店時間							
淡水捷運站發車				飯店發車			
AM:08:00	AM:10:30	PM:13:30	PM:16:00	AM:08:30	AM:11:00	PM:14:30	PM:19:00
AM:08:30	AM:11:00	PM:14:00		AM:09:00	AM:11:30	PM:15:00	PM:20:00
AM:09:00	AM:11:30	PM:14:30		AM:09:30	PM:12:00	PM:15:30	PM:21:00
AM:09:30	PM:12:00	PM:15:00		AM:10:00	PM:13:00	PM:16:30	
AM:10:00	PM:13:00	PM:15:30		AM:10:30	PM:13:30	Pm:17:30	

2015/03/08 淡水捷運站 2 號出口發車至飯店時間						
淡水捷運站發車			飯店發車			
AM:07:30	AM:09:00	AM:10:30	AM:08:00	AM:09:30	AM:11:30	PM:13:00
AM:08:00	AM:09:30	AM:11:00	AM:08:30	AM:10:00	PM:12:00	PM:14:00
AM:08:30	AM:10:00		AM:09:00	AM:11:00	PM:12:30	

會場分佈圖


吉祥廳
寄物區
A1 耀瑞
報到處
banner
男廁
女廁
A4 台灣禮來
B2 嬌生
A2 美納里尼
C1 承杏
C2 大昌華嘉
C3 永奇
C4 耀凌
C5 稚庭
咖啡點心區
A3 友華生技
B1 拜耳
如意廳
試片區
倉庫
戶外指標
C6 安斯泰來
C7 健喬信元
機房
團圓廳

會議議程表
Perspectives of Andrology and Sexual Medicine

2015/3/7(星期六)	福容大飯店 2 樓　吉祥廳	福容大飯店 2 樓　如意廳
08:00-16:00	辦理報到、繳費	
08:30-10:00	State-of-Art Lectures (I)	一般論文發表（I 組）
10:00-10:30	Break Time	
10:30-12:00	State-of-Art Lectures (II)	
12:00-12:20	會員大會	
12:30-13:10	Lunch Symposium	
13:20-14:20	Round Table	一般論文發表（S 組）
14:20-15:20	Clinical Debate I	一般論文發表（ED 組）
15:20-15:40	Break Time	
15:40-16:40	Clinical Debate II	一般論文發表（B 組）
17:00-18:30	River Cruise	
18:30-21:30	大會晚宴（福容大飯店 3 樓水仙百合廳）	
2015/3/8(星期日)	福容大飯店 2 樓吉祥廳	福容大飯店 2 樓如意廳
08:00-11:00	辦理報到、繳費	
08:20-10:00	不孕症研討會 從食品安全談與男性生殖的關聯性	一般論文發表（P 組）
10:00-10:20	Break Time	
10:20-11:00	Interactive Panel	感染議題
11:00-12:00	Special Lectures	論文獎發表（E 組）

第八屆理監事

理 事 長：黃志賢

常務理事：劉詩彬 王起杰 林永明 黃世聰

理　　事：張宏江 蔡維恭 吳建志 蔡德甫 陳國強 張進寶 楊緒棣
陳修聖 陳志碩 王炯琨

常務監事：陳　煜

監　　事：劉家駒 郭育成 鄭裕生 謝政興

顧　　問：陳光國 林信男 謝汝敦 黃一勝 江漢聲 簡邦平

秘 書 長：廖俊厚

財 務 長：邱逸淳

大會暨學術演講會工作人員

理 事 長：黃志賢

秘 書 長：廖俊厚

財 務 長：邱逸淳

學 術 組：黃世聰 林永明 陳志碩 陳修聖 陳國強 張宏江 張進寶
蔡維恭 鍾旭東 劉家駒 曹智惟

大會榮譽會長：林文榮

大會會長：蔡維恭

大會秘書長：江百凱

總 務 組：林鼎博 陳俐臻 詹　勤 黃冠鈞

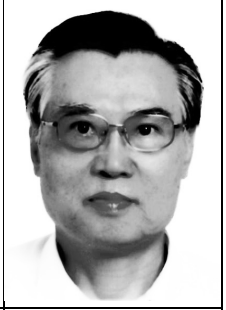
會 務 組：張博淵 陳鈺昕 曾仁澍 楊迪媛 林祖鋒

接 待 組：于蓓華 彭湧蓮 呂鈺婷 朱靜芬

財 務 組：邱逸淳

秘 書 組：廖俊厚 何秀珠

2015 年榮譽會員

姓名：李良明醫師 現職：台北市立萬芳醫院泌尿科主任 台北市立萬芳醫院醫務副院長 台北醫學大學醫學系專任副教授 經歷：台北榮民總醫院主治醫師 台北市立陽明醫院主治醫師 台北市立萬芳醫院醫務部主任 台北市立萬芳醫院醫品副院長	
姓名：張清榮醫師 現職：清榮泌尿科診所院長 部立台中醫院泌尿科特約醫師 經歷：省立台中醫院泌尿科主治醫師 台灣泌尿科醫學會會員 台灣男性學醫學會會員	
姓名：陳世乾醫師 簡歷：1. 臺灣大學醫學院醫學系畢業 2. 日本東京醫科大學泌尿器科研究員 3. 美國布朗大學醫學院小兒泌尿科研究員 4. 省立桃園醫院泌尿科主治醫師 5. 沙烏地阿拉伯霍阜醫院泌尿科主治醫師 6. 臺大醫院泌尿科主治醫師 7. 臺灣大學醫學院醫學系副教授 8. 臺大醫院小兒泌尿科主任 9. 臺灣男性學醫學會理事。 10. 臺灣泌尿科醫學會常務監事 11. 臺灣泌尿科醫學會秘書長 12. 國紹泌尿科學教育基金會董事 13. 衛生署健保局審查醫師 14. 衛生福利部健保審查專家	

姓　　名：洪益豐醫師 現　　職：和興聯合診所院長 經　　歷：彰化基督教醫院泌尿科主任 中華民國泌尿科專科醫師 中華民國外科專科醫師 彰化縣診所協會理事、監事 和群社區醫療群負責人 其他事蹟：98 年榮獲中區優良診所 103 年榮獲大腸癌篩檢績優機構第二名	
姓名：楊聯勝醫師 現職：台北宏恩醫院、永和振興醫院、中和中祥醫院【一般外科、泌尿外科、男性學、急診科】特約醫師。 經歷：1. 福建省立醫院、福醫附屬協和醫院(曾改名為省人民醫院)夏門市第一、市第醫院外科、泌尿科擔任住院醫師/主治醫師/副主任醫師。 2. 上海市進修泌尿外科及男性學培訓。 3. 1988 年 10 月來台行醫，都在台北宏恩醫院、永和振興醫院、景美醫院、慶生醫院、中祥醫院及板橋中興醫院擔任特約外科、泌尿外科及急診科醫師。	
姓名：林文州醫師 現職：馬偕紀念醫院泌尿科專任主治醫師 經歷：馬偕紀念醫院泌尿科專任主治醫師 馬偕紀念醫院泌尿科專任主任	

會員大會程序

一、大會開始

二、主席就位

三、理事長致詞

四、大會榮譽會長致詞

五、男性學成就獎頒獎

六、江萬煊教授傑出研究論文獎頒獎

七、男性學論文獎頒獎

八、大會榮譽會長、前理事長、前秘書長、榮譽會員頒獎

九、理事會暨監事會報告

十、討論事項

(A) 請表決一〇三年度決算案。

(B) 請表決一〇四年度預算案。

(C) 請表決年輕會員出席本學會年度學術演講會發表研究成果施行辦法乙案。

十一、臨時動議

十二、散會

台灣男性學醫學會
獎勵年輕會員出席本學會年度學術演講會發表研究成果施行辦法

中華民國 103 年 12 月 20 日第八屆第 3 次理監事顧問聯席會議通過

（全文 7 條）

	原條文	新條文
第一條	為鼓勵本會年輕會員出席本會年度會員大會暨學術演講會（以下簡稱年會），發表研究成果，進行學術交流，藉以拓展視野並提高本會醫師素質，進而促進台灣男性學發展，特訂定本獎勵辦法。	同左。
第二條	申請資格：需同時具備符合以下所有條件： 一、本會會員，年齡四十足歲以下。年齡之計算以該年度年會舉辦日期為基準。 二、以第一作者投稿研究論文並經大會接受於年會發表者。 三、每篇研究論文限一人申請。	申請資格：需同時具備符合以下所有條件： 一、本會會員，年齡四十歲(含 40)歲以下。年齡之計算以該年度年會舉辦日期為基準。 二、以第一作者投稿研究論文並經大會接受於年會發表者。 第三條刪除。
第三條	申請時程及流程： 一、符合申請資格者，於投稿年會論文摘要時，連同填具完整之申請表（如附件）及相關資料寄送學會秘書處，紙本郵寄或電子郵件皆可。 二、申請表隨年會論文徵稿函件寄出，亦可上學會網站下載。 三、年會論文徵稿截止日期即為本獎勵辦法截止日期，逾期申請恕不受理。 四、學會學術委員會審查接受論文發表後，針對提出本獎勵申請者進行審查作業，最終獲得獎勵者以專函通知。	申請時程及流程： 一、符合申請資格者，於投稿年會論文摘要時，連同填具完整之申請表（如附件）及相關資料寄送學會秘書處，紙本郵寄或電子郵件皆可。 二、申請表隨年會論文徵稿函件寄出，亦可上學會網站下載。 三、年會論文徵稿截止日期即為本獎勵辦法截止日期(每年 11/15 止)，逾期申請恕不受理。 四、學會學術委員會審查接受論文發表後，針對提出本獎勵申請者進行審查作業，最終獲得獎勵者以專函通知，並於年會時頒發狀獎乙紙。

第四條	審查標準與獎勵內容： 一、學會學術委員會依據申請者提供之資料就下列項目評定分數並排序： 1. 申請者的學術表現。 2. 本次年會發表論文的內容及其學術上的重要性。 二、若上述分數相同，以專職服務單位離年會場地較遠者為優先考量。 三、核予補助人數及金額依據當年度學會經費狀況及申請件數由理監事顧問聯席會議核定，補助金額以新台幣5,000~10,000元為原則。	審查標準與獎勵內容： 一、學會學術委員會依據申請者提供之資料就下列項目評定分數並排序： 1. 申請者的學術表現。 2. 本次年會發表論文的內容及其學術上的重要性。 二、若上述分數相同，以專職服務單位離年會場地較遠者為優先考量。 三、核予補助人數及金額依據當年度學會經費狀況及申請件數由理監事顧問聯席會議核定，補助金額以新台幣 5,000 元為原則。 四、每人每年以限獲補助 1 次為限。
第五條	獲得獎勵者於年會之後一個月內，填具領據，並附上參加心得一篇(形式不拘，500~1000 字內)，逕寄學會秘書處，俾便辦理獎勵金撥款事宜。	同左。
第六條	本辦法未盡事宜，悉依本學會有關規定辦理之。	同左。
第七條	本辦法經理監事顧問聯席會議通過後公告實施；修正時，亦同。	同左。

報告事項

一、理事會報告

(1)會務報告及計畫：

1. 103 年度工作報告。
2. 104 年度工作計劃。
3. 台灣 SDACT 委員會 103 年度工作報告。
4. 台灣 SDACT 委員會 104 年度工作計劃。

(2)經費決算及預算案：

1. 103 年度決算案。
2. 104 年度預算案。

(3)會員概況：

1. 會員人數 350 名（含永久會員 109 名）。

103 年度新入會員名單

編號	姓名	服務單位
482	陳重欽	家欣診所
483R	翁竹浩	馬偕醫院泌尿科住院醫師
484R	詹　勤	馬偕醫院泌尿科住院醫師
485R	陳俐臻	馬偕醫院泌尿科住院醫師
486R	黃冠鈞	馬偕醫院泌尿科住院醫師
487R	林鼎博	馬偕醫院泌尿科住院醫師
488R	曾仁澍	馬偕醫院泌尿科住院醫師
489	李致樵	馬偕醫院泌尿科主治醫師
490R	陳鈺昕	馬偕醫院泌尿科住院醫師
491	陳建志	馬偕醫院泌尿科主治醫師
492	吳靖方	嘉義長庚泌尿科主治醫師

編號	姓名	服務單位
493R	錢祖明	高醫泌尿科住院醫師
494R	呂研嫚	高醫泌尿科住院醫師
495R	張孟霖	台北醫學大學附醫泌尿科住院醫師
496	吳哲安	大甲李綜合醫院主治醫師
497	許思文	東港安泰醫院泌尿科主治醫師
498	羅浩倫	高雄長庚醫院泌尿科主治醫師
499	黃培林	楊梅天成醫院安品中心主任 楊梅天成醫院泌尿科主治醫師
500R	黃奕燊	台北榮民總醫院泌尿科住院醫師
501	王紹全	中山醫大附醫泌尿科主治醫師
502	蔡東翰	東翰診所（家醫科）負責醫師
503R	周博敏	台大醫院泌尿部住院醫師
504	陳卷書	台中榮總泌尿科主治醫師
505	林憲雄	柳營奇美醫院泌尿外科主治醫師
506	謝博帆	中國附醫泌尿部主治醫師
507R	張廷瑞	台北醫學大學附設醫院泌尿科住院醫師
508R	傅士彰	台北醫學大學附設醫院泌尿科住院醫師

2. 榮譽會員　32 名（含外賓 2 名）。
3. 團體會員　 5 名。

二、監事會報告

(一) 關於大會執行工作經過，理事會均已分別報告，並視實際需要配合經費執行。

(二) 關於理事會處理會務均依本會章程辦理，遇有重要事項，則召開各委員會或理監事聯席會議商討解決。

(三) 本年理事會工作積極，值得向本會全體會員告慰。

台灣男性學醫學會
一〇三年度工作報告
中華民國 103 年 1 月 1 日至 103 年 12 月 31 日止

一、會員大會

3 月 1 日假成大醫學院第三講堂舉辦本會 103 年度第八屆第 1 次會員大會。

二、學術演講

(1) 3 月 1-2 兩日假成大醫學院第二至第三講堂舉辦本會第 41 次學術演講會。
(2) 8 月份舉辦本會第 42 次學術演講會。

三、理監事會議

(1) 3 月 2 日召開本會第八屆第一次理監事聯席會議。
(2) 9 月 6 日召開本會第八屆第二次理監事聯席會議。
(3)12月20日召開本會第八屆第三次理監事聯席會議。

四、繼續教育

(1)2 月 28 日假台南香格里拉大飯店舉辦本會 2014 年【Young Men's Sexual and Reproductive Health】Precongress Symposium。
(2) 4 月 19 日假台大醫學院 101 講堂舉辦【江萬煊教授追思學術研討會暨泌尿科醫學會北區月會】。
(3) 5 月 3-4 兩日假礁溪長榮桂冠酒店舉行本會 2014【TAA Symposium A & B】學術會議。
(4) 8 月 2-3 兩日假日月潭大飯店舉辦本會【Controversial Issues in Sexual Medicine】研討會。
(5)配合台灣 SDACT 委員會舉辦地方性學術研討會，詳內容請參見 103 年度台灣 SDACT 委員會工作報告。
(6) 11 月 15 日假台北福容飯店舉辦【Men's Health Symposium】。
(7)12 月 13 日假台中日月千禧酒店 5 樓會議室舉辦本會【Cross Talk between Experts in TCS and TAA Focus on PE】研討會。

五、出版

(1)大會手冊。
(2)研討會書籍。
(3)本會電子報會訊：
第 7 卷第 12 期、第 8 卷第 1 期、第 8 卷第 2 期、第 8 卷第 3 期。
(4)男性不孕症專書、早洩、男性更年期以及男性健康衛教手冊。

六、網站：www.tand.org.tw

七、論文獎比賽（含江萬煊教授傑出研究論文獎）

為促進會員之學術研究風氣，每年舉辦一次論文比賽，分基礎與臨床兩組（含住院醫師組）。其名次由本會學術暨教育委員會評定並決議頒發獎項或從缺。

八、男性學成就獎

為獎勵對國內男性學研究有貢獻之學者，特頒此獎項以資鼓勵。

九、國際學術交流

Dr. Allen D. Seftel and Dr. Sung Won LEE 等人應邀蒞臨本會舉辦之「103 年度第八屆第一次會員大會暨第 41 次學術演講會」中作專題演講。

台 灣 男 性 學 醫 學 會

一〇四年度作計劃

中華民國 104 年 1 月 1 日至 104 年 12 月 31 日止

一、會員大會

3 月 7 日假淡水漁人碼頭福容大飯店二樓吉祥廳舉辦本會 104 年度第八屆第 2 次會員大會。

二、學術演講

(1) 3 月 7-8 兩日假淡水漁人碼頭福容大飯店二樓吉祥、如意廳舉辦本會第 43 次學術演講會。

(2) 8 月份舉辦本會第 44 次學術演講會。

三、理監事會議

(1)三月份召開第八屆第 4 次理監事聯席會議。

(2)八月份召開第八屆第 5 次理監事聯席會議。

(3)十二月份召開第八屆第 6 次理監事聯席會議。

四、繼續教育

(1)舉辦 TAA（7、10、12 月份）地方學術研討會。

(2)台灣 SDACT 委員會舉辦之地方繼續教育課程及衛教講座。

五、出版

(1)大會手冊。

(2)研討會書籍。

(3)本會電子報會訊：

第 8 卷第 4 期、第 8 卷第 5 期、第 8 卷第 6 期、第 8 卷第 7 期。

六、網站：www.tand.org.tw

七、論文獎比賽（含江萬煊教授傑出研究論文獎）

為促進會員之學術研究風氣，每年舉辦一次論文比賽，分基礎與臨床兩組（含住院醫師組）。其名次由本會學術暨教育委員會評定並決議頒發獎項或從缺。

八、男性學成就獎

為獎勵對國內男性學研究有貢獻之學者，特頒此獎項以資鼓勵。

九、國際學術交流

日本外賓Dr. Ryoichi Hamasuna, Professor of Urology應邀蒞臨本會舉辦之「104年度第八屆第二次會員大會暨第43次學術演講會」中作專題演講。

台 灣 男 性 學 醫 學 會

台灣性功能障礙諮詢暨訓練委員會
（台灣SDACT委員會）
一〇三年度工作報告
中華民國103年1月1日至103年12月31日止

一、委員會會議

(1) 6 月 28 日召開台灣 SDACT 委員會第七屆第 4 次委員會會議。

(2) 12 月 20 日召開台灣 SDACT 委員會第八屆第 1 次委員會會議。

二、繼續教育

(1) 藥師學術研討會：7 月 19 日假台中雲品飯店舉辦【Erectile Dysfunction and BPH-LUTS Disease and Treatment Understanding 】研討會。

(2) 醫師學術研討會：9 月 26 日、10 月 24 日、10 月 31 日以及 12 月 20 日分別假台南、高雄、台中以及台北舉行【男性更年期學術研討會】，合計四場。

(3) 配合 TAA，合併舉辦台灣 SDACT 醫師繼續教育課程：

- 9 月 21 日假台北喜來登大飯店舉辦【Men's Health and Metabolic Syndrome 研討會】。
- 10 月 4 日假台大醫院國際會議中心舉辦【男性不孕症與早洩學術研討會】。
- 11 月 1 日假臺北文創大樓 6 樓多功能廳 E 廳舉辦【男性健康學術研討會】。

三、民衆教育

全省民衆巡迴衛教講座 10-15 場。

四、活動計劃：

重新設置 - 男性性健康問卷（早洩研究）。

五、出版

早洩衛教手冊、男性健康手冊。

六、網站

sdact.tand.org.tw

台 灣 男 性 學 醫 學 會

台灣性功能障礙諮詢暨訓練委員會

（台灣SDACT委員會）

一〇四年度工作計劃

中華民國104年1月1日至104年12月31日止

一、委員會會議

(1) 5 月份召開台灣 SDACT 第八屆第 2 次委員會會議。

(2) 12 月份召開台灣 SDACT 第八屆第 3 次委員會會議。

二、繼續教育

(1)全省不定期舉辦醫師／藥師訓練講座。

(2)配合 TAA 研討會活動，合併舉辦台灣 SDACT 委員會繼續教育課程。

三、民衆教育

全省民衆巡迴衛教講座。

四、活動計劃：

重新設置 - 男性性健康問卷（早洩研究）。

五、出版

早洩衛教手冊、男性健康手冊。

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(104)台男文醫字第 001 號
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論著題目：Data on the Utilization of Treatment Modalities for ED in Taiwan in the era of PDE5 Inhibitors
理事長　黃志賢
中華民國一〇四年三月七日


(104)台男文醫字第 002 號
台灣男性學醫學會
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頒獎鼓勵
論著題目：Factors Associated with Sex Hormones and ED in Male Taiwanese Participants with Obesity
理事長　黃志賢
中華民國一〇四年三月七日


(104)台男文醫字第 003 號
台灣男性學醫學會
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查會員 張 宏 江 參加本會
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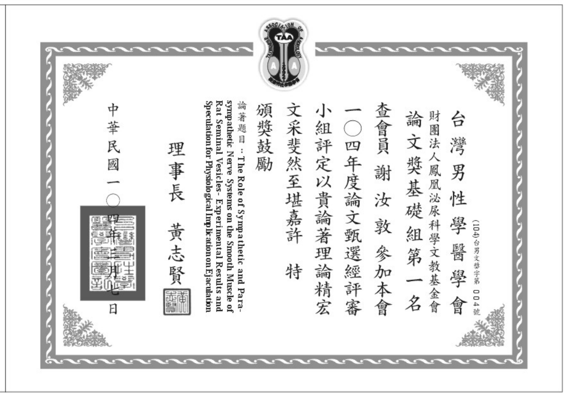
論著題目：Predictive Clinical Indicators of Biochemical Progression in Advanced Prostate Cancer Patients Receiving Leuplin Depot as Androgen Deprivation Therapy
理事長　黃志賢
中華民國一〇四年三月七日


(104)台男文醫字第 004 號
台灣男性學醫學會
財團法人鳳凰泌尿科學文教基金會
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頒獎鼓勵
論著題目：The Role of Sympathetic and Parasympathetic Nerve Systems on the Smooth Muscle of Rat Seminal Vesicles- Experimental Results and Speculation for Physiological Implication on Ejaculation
理事長　黃志賢
中華民國一〇四年三月七日


(104)台男文醫字第 005 號
台灣男性學醫學會
男 性 學 論 文 獎
一般醫師基礎組第二名
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文采斐然至堪嘉許　特
頒獎鼓勵
論著題目：SEPT12-Microtubule Complexes are Required for Sperm Head and Tail Formation
理事長　黃志賢
中華民國一〇四年三月七日


(104)台男文醫字第 006 號
台灣男性學醫學會
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文采斐然至堪嘉許　特
頒獎鼓勵
論著題目：The Role of Hormones on Semen Parameters in Patients with Idiopathic or Varicocele-related Oligoasthenoteratozoospermia (OAT) Syndrome
理事長　黃志賢
中華民國一〇四年三月七日

感謝狀及其他獎狀

The Taiwanese Association of Andrology
Presented to Professor Ryoichi Hamasuna MD, PhD
in appreciation for your spectacular speech in Taipei, Taiwan
March 7-8, 2015
President William J. Huang MD, PhD

感謝狀及其他獎狀


感 謝
大會榮譽會長 林文榮 醫師
協助本學會第八屆第二次會員大會
暨第四十三次學術演講會之順利舉行
特贈榮牌，謹致謝忱。
台灣男性學醫學會
理事長 黃 志 賢 敬贈
104年3月7日


台灣男性學醫學會
第七屆理事長(100年3月至103年3月)
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表率群倫
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理事長 黃 志 賢 敬贈
104年3月7日


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才德咸欽
台灣男性學醫學會
理事長 黃 志 賢 敬贈
104年3月7日


李良明醫師 惠存
張清榮醫師 惠存
陳世乾醫師 惠存
洪益豐醫師 惠存
楊聰勝醫師 惠存
林文州醫師 惠存
榮譽會員獎

一〇四年三月七日（星期六）
福容大飯店 2 樓　吉祥廳

【State-of-Art Lectures I】　　座長：陳光國醫師 謝汝敦醫師

時間	題目	主講人
08:30-09:00	Updates and Perspectives in Erectile Dysfunction	黃世聰醫師
09:00-09:30	Recent Advancement in Genitourinary Tract Infection/ Inflammation: Asian Guideline on Sexually Transmitted Disease	Ryoichi Hamasuna, Prof.of Urology, Kitakyushu, Japan
09:30-10:00	Updates and Perspectives in the Medical Treatment of Metastatic Castration-resistant Prostate Cancer	黃志賢醫師

【State-of-Art Lectures II】　　座長：江漢聲醫師 林信男醫師

時間	題目	主講人
10:30-11:00	Practical Tips to Optimize Treatment for Premature Ejaculation with Dapoxetine	簡邦平醫師
11:00-11:30	Updates and Perspectives in Male Infertility	吳建志醫師
11:30-12:00	Updates and Perspectives in the Medical Treatment of BPH/LUTS	廖俊厚醫師

【Lunch Symposium】　　座長：黃志賢醫師

時間	題目	主講人
12:30-13:10	Penile Rehabilitation with PDE5 Inhibitors in Men Following Radical Prostatectomy	簡邦平醫師

一〇四年三月七日（星期六）
福容大飯店 2 樓　吉祥廳

【Round Table】

座長：黃一勝醫師 王起杰醫師

時間	題目	主講人
Current and Alternative Management of Late-onset Hypogonadism		
13:20-13:35	(1) Testosterone Replacement Therapy	劉家駒醫師
13:35-13:50	(2) Clomiphene and Tamoxifen	許毓昭醫師
13:50-14:05	(3) Lifestyle Modification Including Diet and Exercise	盧致誠醫師
14:05-14:20	(4) DHEA and Other Nutritional Supplement	何承勳醫師

【Clinical Debate I】

座長：楊緒棣醫師 崔克宏醫師

時間	題目	主講人
14:20-14:50	Issue 1：Laser Prostatectomy had Lower Rate of Erectile Dysfunction than TURP	Pros: 黃信介醫師 Cons: 黃奕燊醫師
14:50-15:20	Issue 2：Operation vs. Combined Medical Treatment for a 60 Years Men with Large Prostate	Pros: 王炯琨醫師 Cons: 蔡育賢醫師

【Clinical Debate II】

座長：劉詩彬醫師 廖俊厚醫師

時間	題目	主講人
15:40-16:10	Issue 3：Cialis OAD vs. α-blocker + PDE5 Inhibitor in Men with Concomitant ED and BPH	Pros: 蔡維恭醫師 Cons: 梁景堯醫師
16:10-16:40	Issue 4：Is there an Increased CV Risk after TRT ?	Pros: 林子平醫師 Cons: 劉家駒醫師

一〇四年三月七日（星期六）
福容大飯店 2 樓　如意廳
【一般論文發表】

座長：吳建志醫師 張宏江醫師

時間	內容
08:30-08:40 I-1	SEPT12-microtubules Complexes are Required for Sperm-head and-Tail Formation SEPT12-微管蛋白複合體參與精子頭部與尾部生成 郭保麟 [1,†] 江漢聲 [2,†] 汪雅雲 [1] 郭勇哲 [3] 陳美鳳 [4] 游益興 [5] 鄧燕妮 [6] 林淑華 [5] 林盈宏 [2] 成功大學婦產部 [1] 輔仁大學基礎醫學研究所 [2] 成功大學基礎醫學研究所 [3] 長庚大學醫學生物技術暨檢驗學系 [4] 台灣大學醫學檢驗暨生物技術學系 [5] 台南大學生物科技學系 [6] 共同第一作者†
08:40-08:50 I-2	The Effects of Prolactin on Varicocele-induced Hypospermatogenesis in a Rat Model 泌乳素對雄性大鼠精索靜脈曲張誘發之造精低常的效應 陳翎維 [2] 王中麟 [2] 陳宇緊 [2] 林登龍 [1,3,4] 陳光國 [1,3,4] 黃志賢 [1,2,3,4] 國立陽明大學醫學院 醫學系 泌尿學科 [1] 及 生理學科 [2] 書田泌尿科學研究中心 [3] 臺北榮民總醫院 泌尿部 [4]
08:50-09:00 I-3	The Biochemical and Pathological Correlates of Successful Semen Cryopreservation from Patients with Testicular Cancer 睪丸癌病人精子冷凍保存的成功與其病理與生化指標的相關性研究 張宏江 [1,2] 彭元宏 [3] 高銘鴻 [4] 呂育全 [1] 蔡芳生 [3] 謝汝敦 [1] 國立臺灣大學醫學院附設醫院 [1] 及新竹分院泌尿部 [2] 桃園天晟醫院泌尿科 [3] 恩主公醫院泌尿科 [4]
09:00-09:10 I-4	Role of Trichomoniasis Infection in Patients with Infertility and Pyospermia: A Preliminary Report 陰道滴蟲感染在不孕併膿精症病人中所扮演的角色：初步報告 陳煜 謝明里 黃世聰 黃信介 許毓昭 張博誌 林口長庚紀念醫院 泌尿科 長庚大學
09:10-09:20 I-5	Prognostic Factors of ICSI Cycles Using Surgically Retrieved Sperm 外科手術取得精子進行單精子卵胞質注射術之婦科預後因子分析 黃志賢 黃奕燊 王伊蕾 李新揚 國立陽明大學醫學院 醫學系泌尿學科及婦產學科 台北榮民總醫院 泌尿部及婦女醫學部
09:20-09:30 I-6	Relationship between Lipid Profiles and Semen Quality in Taiwanese Male Population 在臺灣男性族群血脂肪與精液品質之相關性探討 曹智惟 [1] 查岱龍 [1] 周雨青 [2] 劉沁瑜 [3] [1] 國防醫學院 三軍總醫院 外科部 泌尿外科 [2] 國防醫學院 公共衛生學系 [3] 輔仁大學 營養科學系
09:30-09:40 I-7	Fertility Preservation in Young Men with Klinefelter's Syndrome and Azoospermia 年輕男性合併克林菲特氏症候群及無精蟲症之生育能力保留 翁涵育 鄭裕生 林永明 國立成功大學醫學院附設醫院泌尿部

一〇四年三月七日（星期六）
福容大飯店 2 樓　如意廳
【一般論文發表】

座長：吳建志醫師 張宏江醫師

時間	內容
09:40-09:50 I-8	Clinical Characteristics and Sperm Retrieval Outcomes in Non-obstructive Azoospermic Men with Hypospermatogenesis 非阻塞性無精症合併造精功能低下的病人臨床表徵及取精成功率 鄭裕生[1,2] 林宗彥[1] 林佩瑜[3] 林永明[3] [1]國立成大醫院斗六分院泌尿科 [2]國立成功大學醫學院臨床醫學研究所 [3]國立成功大學醫學院附設醫院泌尿科
09:50-10:00 I-9	Counting Sperms by Microfluidic Sperm Chips Applied on Smart Phones-Prototype and Preliminary Performance 利用微流道晶片在智慧型手機上測量精子品質-原型機與初步結果 蔡芳生[1,2] 張宏江[2] 謝汝敦[2] 胡文聰[3] 林書聖[3] 天成醫院 泌尿科[1] 台大醫院 泌尿部[2] 國立台灣大學 應用力學研究所[3]

一〇四年三月七日（星期六）
福容大飯店 2 樓　如意廳
【一般論文發表】

座長：張進寶醫師 莊豐賓醫師

時間	內容
13:20-13:30 S-1	The Effects of Diet Control and Exercise Intervention on the Sexual Function in People with Metabolic Syndrome?--A Prospective Controlled Study 飲食控制與運動介入對代謝症候群民眾性功能之效果 郭育成[1,2] 沈恆立[1] 高木榮[3] 台北市立聯合醫院泌尿科[1] 慈濟大學泌尿科[2] 台北市立聯合醫院復健[3]
13:30-13:40 S-2	Factors Associated with Sex Hormones and Erectile Dysfunction in Male Taiwanese Participants with Obesity 台灣男性肥胖勃起功能障礙和性荷蒙相關因子研究 奚明德[1] 趙建剛[2] 馬瀰嘉[3] 郝立智[4] 趙怡臻[5] [1]高雄榮民總醫院 台南分院病理檢驗科 [2]台北榮民總醫院 玉里分院精神部 [3]成功大學統計系 [4]高雄榮民總醫院 台南分院病理檢驗科 [5]東南大學臨床醫學研究所
13:40-13:50 S-3	Sexual Dysfunction in Men Who Abuse Amphetamine 安非他命濫用男性的性功能障礙 簡邦平 高雄榮民總醫院基礎醫學研究科 國立陽明醫學院醫學系
13:50-14:00 S-4	Clinical Presentations of Men with Premature Ejaculation 早洩病患的臨床表現特徵 簡邦平 高雄榮民總醫院基礎醫學研究科 國立陽明醫學院醫學系
14:00-14:10 S-5	Effectiveness and Safety of Dapoxetine in the Treatment of Premature Ejaculation 必利勁治療早洩的效果與安全性 簡邦平 高雄榮民總醫院基礎醫學研究科 國立陽明醫學院醫學系
14:10-14:20 S-6	Ethical and Technical Considerations in Designing a Clinical Trial for a Physiological Penile Venous Stripping Surgery 設計陰莖靜脈截除手術臨床試驗的倫理及技術考量 許耕榕[1,2] 戴槐青[2] 許智源[1] 謝政興[3] 栩仕診所 顯微手術功能重建暨研究中心[1] 國立台灣大學醫學院附設醫院 泌尿部[2] 慈濟大學醫學院台北慈濟醫院 泌尿科[3]

一〇四年三月七日（星期六）
福容大飯店 2 樓　如意廳
【一般論文發表】

座長：蔡德甫醫師 邱逸淳醫師

時間	內容
14:20-14:30 ED-1	Exploration of the Association between Dietary Intake and Endothelial Function among Male Erectile Dysfunction Population 探討飲食元素與血管內皮功能在男性勃起功能障礙族群中之相關聯性 曹智惟[1] 陳辰洵[2] 查岱龍[1] 劉沁瑜[2] [1]國防醫學院 三軍總醫院 外科部 泌尿外科 [2]輔仁大學營養科學系
14:30-14:40 ED-2	Infertile Issue in Young Men with Erectile Dysfunction: Primary Report 年輕男性勃起障礙合併不孕症問題：初步報告 蔡維恭 馬偕紀念醫院　泌尿科
14:40-14:50 ED-3	Herb Formula Enhances Treatment of Impotent Patients after Penile Venous Stripping, A Randomized Clinical Trial 中草藥加強勃起功能障礙病人接受陰莖靜脈截除手術後的治療效果：隨機臨床試驗 謝政興[1]　許耕榕[2,3] 陳世乾[3] 許智源[2] 慈濟大學醫學院 台北慈濟醫院 泌尿科[1] 栩仕診所 顯微手術功能重建暨研究中心[2] 國立台灣大學醫學院附設醫院 泌尿部[3]
14:50-15:00 ED-4	Salvaging Penile Venous Stripping for Erection Restoration in Patients had Undergone Prior Varied Vascular Intervention 先前已接受過血管介入式治療的勃起功能障礙病人接受陰莖靜脈截除手術恢復勃起功能 謝政興[1] 許耕榕[2,3] 陳世乾[3] 許智源[2] 慈濟大學醫學院 台北慈濟醫院 泌尿科[1] 栩仕診所 顯微手術功能重建暨研究中心[2] 國立台灣大學醫學院附設醫院 泌尿部[3]
15:00-15:10 ED-5	Prevalence of Undetected Cardiovascular Risk Factors in Men with Erectile Dysfunction 勃起功能障礙病患未診斷的心血管疾病風險因子的盛行率 簡邦平 高雄榮民總醫院基礎醫學研究科 國立陽明醫學院醫學系
15:10-15:20 ED-6	Penile Prepuce Bead Implants 入珠 林介山[1,2] 簡佑全[1] 江恆杰[1] 陳建廷[1] 王百孚[1] 張進寶[1] 嚴孟意[1] 黃勝賢[1] 石宏仁[1] 周明智[2] 彰化基督教醫院 外科部 泌尿科[1] 中山醫學大學醫學研究所[2]

一〇四年三月七日（星期六）
福容大飯店 2 樓　如意廳
【一般論文發表】

座長：郭育成醫師 陳修聖醫師

時間	內容
15:40-15:50 B-1	Extracts of *Epimedium brevicornum* Maxim Relax Rat Corpus Cavernosum 分層萃取中藥淫羊藿中活性成分及對大鼠血管的影響 呂研嫚[1] 錢祖明[1] 王起杰[1,2] [1]高雄醫學大學 附設中和紀念醫院 泌尿科 [2]高雄醫學大學 醫學系
15:50-16:00 B-2	Pro-erectile Effect of *Epimedium brevicornum* Maxim Extract on Rabbit Corpus Cavernosum 中藥淫羊藿對大白兔勃起功能的影響 錢祖明[1] 呂研嫚[1] 王起杰[1,2] [1]高雄醫學大學 附設中和紀念醫院 泌尿科 [2]高雄醫學大學 醫學系
16:00-16:10 B-3	Long-term Administration of Ketamine in a Rat Model is Associated with Erectile Dysfunction 以大鼠模式探討K他命濫用與勃起功能障礙的相關性 吳宜娜[1,2] 商宏昇[3,4] 林裕峰[4] 江漢聲[2,5] 輔仁大學 食品營養博士學程[1] 輔仁大學 基礎醫學研究所[2] 三軍總醫院 病理科[3] 台北醫學大學　臨床醫學研究所[4] 台北醫學大學附設醫院 泌尿科[5]
16:10-16:20 B-4	The Effect of Smooth Muscle Progenitor Cells on Erectile Function in Bilateral Cavernous Nerve Injury Rat Model 研究平滑肌前驅細胞對雙側海綿體神經損傷引發勃起功能障礙大鼠的效果 吳宜娜 林伯軒 江漢聲 輔仁大學學校財團法人輔仁大學 基礎醫學研究所
16:20-16:30 B-5	The Effect of Nano-DHA on Erectile Function in Bilateral Cavernous Nerve Injury Rat Model 奈米化 DHA 對雙側海綿體神經損傷引發勃起功能障礙大鼠的效果 莊以嬰[1]　廖俊厚[2] 輔仁大學學校財團法人輔仁大學 基礎醫學研究所[1] 天主教耕莘醫療財團法人耕莘醫院 泌尿外科[2]
16:30-16:40 B-6	Human Penile Tunica Albuginea: Anatomy Discovery, Functional Evidence and Role in Reconstructive Surgery 人類陰莖白膜：解剖發現、功能上的證據及在重建手術扮演的角色 許耕榕[1,2] 戴槐青[2] 許智源[1] 謝政興[3] 栩仕診所 顯微手術功能重建暨研究中心[1] 國立台灣大學醫學院附設醫院 泌尿部[2] 慈濟大學醫學院 台北慈濟醫院 泌尿科[3]

一〇四年三月八日（星期日）
福容大飯店 2 樓　吉祥廳
【男性不孕症研討會–食品安全與男性生殖】

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時間	講題	主講人	座長
08:20-08:30	前言	黃志賢理事長	
08:30-08:40	反式脂肪酸對男性生殖影響	鄭裕生醫師/林永明醫師	吳建志醫師
08:40-08:50	棉籽油（棉酚）與男性生殖	張孟霖醫師/吳建志醫師	
08:50-09:00	重金屬鎘與男性生殖	魏子鈞醫師/黃志賢醫師	張宏江醫師
09:00-09:10	丙烯醯胺與男性生殖	蘇彥榮醫師/張宏江醫師	
09:10-09:40	塑化劑與男性生殖	張偉翔研究生	林永明醫師
09:40-10:00	討論與結語	全體講者	

一〇四年三月八日（星期日）
福容大飯店 2 樓　吉祥廳

【Interactive Panel】　　座長：黃世聰醫師

時間	題目	主講人
How do I Manage Sexual Dysfunction in These Patients		
10:20-11:00	(1) Young Adult Refractory to PDE5 Inhibitor (2) Concomitant ED, PE, and hypogonadism (3) Elderly Patients with BPH under 5ARI	吳季如醫師 王起杰醫師 簡邦平醫師

【Special Lectures】　　座長：徐慧興醫師 李祥生醫師

時間	題目	主講人
Updates in the Management of Infrequently Encountered Sexual Dysfunction and Disease		
11:00-11:15	Peyronie's Disease and Penile Curvature	謝政興醫師
11:15-11:30	Priapism	曹智惟醫師
11:30-11:45	Delay Ejaculation	劉建良醫師
11:45-12:00	Female Sexual Dysfunction	蔡德甫醫師

一〇四年三月八日（星期日）
福容大飯店 2 樓　如意廳
【一般論文發表】

座長：蔡維恭醫師 劉家駒醫師

時間	內容
08:20-08:30 P-1	For Resection Weight Less than Five Gram by Transurethral Biopsy of Prostate, is it Necessary to do Combined Transurethral Incision of Bladder Neck? --- A Nation-wide Database Study 對於小於五公克之經尿道攝護腺切片術是否需要合併膀胱頸切開術? 魏子鈞[1,2] 林子平[1,2] 林登龍[1,2] 鍾孝仁[1,2] 黃逸修[1,2] 陳光國[1,2] 台北榮民總醫院 泌尿部[1] 國立陽明大學醫學院 泌尿學科 及 書田泌尿科學研究中心[2]
08:30-08:40 P-2	Urinary Bladder Function of Male Patients with Pelvic Organ Oncology 骨盆器官的惡性腫瘤對男性患者膀胱功能的影響 林憲雄 盧致誠 林嘉禾 范文宙 鄭哲舟 奇美醫療財團法人柳營奇美醫院 外科部 泌尿外科
08:40-08:50 P-3	Marital Status is an Independent Determinant of Quality of Life in Prostate Cancer Patients: A Mixed Effect Model Analysis 婚姻狀況是影響攝護腺癌生活品質的獨立因子：混合效果模型分析 高耀臨[1*] 蔡育賢[1*] 歐妃雅[1] 許雅筑[2] 歐建慧[1] 楊文宏[1] 鄭鴻琳[1] 蔡宗欣[1*] 王榮德[2] 成大醫學院附設醫院[1] 泌尿部及[2] 公共衛生學院 台南 台灣
08:50-09:00 P-4	Acute Renal Failure after Thulium Laser Prostatectomy: Two Cases Report 銩雷射攝護腺手術後併發急性腎衰竭：兩案例報告 周詠智[1] 王炯琨[1,2] 恩主公醫院 泌尿科[1] 中原大學生物醫學工程學系[2]
09:00-09:10 P-5	Rare Complication of HIFU Treatment in Cancer of Prostate: Incontinence or Urine Retention 以海福刀治療前列腺癌之罕見併發症病例報告：尿失禁或尿瀦留 徐慧興 張世琦 王旭翔 莊恆彰 邵逸宏 羅東博愛醫院 泌尿科
09:10-09:20 P-6	Clinical Relevance of Prostate Cancer Mapping via Transrectal Random Biopsy-analysis of 5450 Cores in South Taiwan 經直腸超音波隨機切片分佈對於攝護腺癌之臨床意義—南台灣5450針之分析 吳冠諭 蔡育賢 楊文宏 蔡宗欣 成功大學附設醫院泌尿部
09:20-09:30 P-7	Clinical Efficacy of Transrectal Prostate Needle Biopsy in Men Younger than 50 Years with an Elevated Prostate-Specific Antigen Concentration (＞4.0 ng/mL) Based on Biopsy Results and Follow-up Status 探討經直腸超音波攝護腺切片在 50 歲以下高攝護腺指數年輕族群的效益 呂謹亨[1] 林子平[1,2,3] 范玉華[1,2,3] 林志杰[1,2,3] 鍾孝仁[1,2,3] 郭俊逸[1,2,3] 吳宏豪[1,2,3] 黃逸修[1,2,3] 黃志賢[1, 2, 3] 張延驊[1,2,3] 林登龍[1,2,3] 陳光國[1,2,3] 台北榮民總醫院 外科部 泌尿科[1] 國立陽明大學醫學院 泌尿學科[2] 書田泌尿科學研究中心[3]
09:30-09:40 P-8	Preliminary Results of High-intensity Focused Ultrasound in the Treatment of Prostate Cancer 以高能聚焦超音波(海福刀)治療前列腺癌的初步結果 陳建廷 張進寶 黃勝賢 王百孚 江恆杰 林介山 彰化基督教醫院 外科部 泌尿科

一〇四年三月八日（星期日）
福容大飯店 2 樓　如意廳
【感染議題】

座長：陳偉寶醫師

時間	題目	主講人
10:20-10:40	STD and Prostate	陳　煜醫師
10:40-11:00	Taiwanese Guideline on Ketamine Cystitis	楊緒棣醫師

一〇四年三月八日（星期日）
福容大飯店 2 樓　如意廳
【論文獎發表】

座長：陳志碩醫師　林永明醫師

時間	題目	發表人
江萬煊教授傑出研究論文獎		
11:00-11:10 E1	Data on the Utilization of Treatment Modalities for ED in Taiwan in the Era of PDE5 Inhibitors	蔡維恭醫師
男性學論文獎		
11:10-11:20 E2	男性學論文獎 一般醫師臨床組 第一名 Factors Associated with Sex Hormones and ED in Male Taiwanese Participants with Obesity	趙建剛醫師
11:20-11:30 E3	男性學論文獎 一般醫師臨床組 第二名 Predictive Clinical Indicators of Biochemical Progression in Advanced Prostate Cancer Patients Receiving Leuplin Depot as Androgen Deprivation Therapy	張宏江醫師
11:30-11:40 E4	男性學論文獎 一般醫師基礎組 第一名 (財團法人鳳凰泌尿科學文教基金會論文獎) The Role of Sympathetic and Parasympathetic Nerve Systems on the Smooth Muscle of Rat Seminal Vesicles - Experimental Results and Speculation for Physiological Implication on Ejaculation	謝汝敦醫師
11:40-11:50 E5	男性學論文獎 一般醫師基礎組 第二名 SEPT12-microtubule Complexes are Required for Sperm Head and Tail Formation	林盈宏老師
11:50-12:00 E6	男性學論文獎 住院醫師臨床組 第一名 The Role of Hormones on Semen Parameters in Patients with Idiopathic or Varicocele-related Oligoasthenoteratozoospermia (OAT) Syndrome	魏子鈞醫師

感謝　輝瑞大藥廠股份有限公司及財團法人鳳凰泌尿科學文教基金會，對於本會【男性學論文獎】之專款贊助與支持，特此列名申謝，無任感荷！

State-of-Art Lectures I

Updates and Perspectives in Erectile Dysfunction

黃世聰醫師
長庚紀念醫院泌尿外科

Summary

Erectile dysfunction (ED) is one of the most common male sexual dysfunction in daily andrology practice. The diagnostic and therapeutic approach has been dramatic change after the launch of sildenafil, the first oral phosphodiesterase type 5 inhibitor (PDE5-I) pill in 1998.(1) The adoption of the principle of "patient's goal approach" further simplify the diagnostic process and most first line physicians can diagnose ED directly based on history, physical examination and basic laboratory studies.(2, 3)

Although more than 70% of ED patients can have significant improvement on their erectile function after on-demand PDE5-Is treatment, Non-responders to PDE5-Is remain an unsolved issue. Most PDE5-Is non-responders have severe co-morbidities resulting in neurovascular disturbance, endothelium dysfunction, smooth muscle degeneration and/or hormonal impairments. Uncontrolled diabetic mellitus, major pelvic surgeries such as radical prostatectomy or proctectomy and severe atherosclerosis of pelvis are common underlying causes among PDE5-Is non-responders.(4)

Recently more strong epidemiological evidences have also linked ED to metabolic syndrome and coronary artery disease, which has further tightened the concept of ED as an early symptom of endothelium dysfunction.(5,6) Patient with ED may be beneficial from earlier treatment of underlying co-morbidities.(7,8) Whether long-term PDE5-Is can reverse endothelium dysfunction remains unclear but early pilot studies had showed short-term improvement on endothelium function based on flow-mediated dilatation (FMD) study of brachial artery. But the long term effectiveness on endothelium function rehabilitation has not yet been supported by clinical trials.(9)

Epidemiologic data had also supported the link of lower urinary tract symptoms suggested of benign prostatic hyperplasia (LUTS/BPH) to ED. In a multinational survey involving 12,825 men aged 50 to 80 years, sexual disorders and their impact on quality of life were strongly related to both age and severity of LUTS. The relationship between sexual disorders and LUTS is independent of comorbidities including diabetes, hypertension, cardiac disease and hypercholesterolemia.(10) The proposed common pathogenesis of LUTS/BPH and ED include reduced nitric oxide/cyclic guanosine monophosphate signaling, increased RhoA kinase pathway activity, autonomic overactivity and pelvic ischemia.(11)

In Oct. 2011, FDA further approved tadalafil daily dosing for the indication of lower urinary tract symptoms suggested of benign prostatic hyperplasia (LUTS/BPH) with or without erectile dysfunction. Although tadalafil daily dosing can improve irritation symptoms from LUTS/BPH, the effectiveness on uroflow rate improvement is not comparative to alpha blockers.(12,13) Whether the concomitant use of PDE5-Is and alpha blockers have more benefits with regards to symptoms relief and uroflow improvement are under evaluation. More long term safety data are needed to prove its concomitant use with alpha blockers. Other potential usage of daily dosing PDE5-Is in andrology include erectile rehabilitation from radical prostatectomy, rescue treatment for PDE5-Is nonresponders and endothelium dysfunction recovery.

A newest formulation of short acting PDE5-I, avanafil, was approved by FDA on 27 April 2012 for the treatment of ED. Short onset of action within 15 minutes had been noted in early pilot studies, but phase III pivotal data showed similar efficacy and safety profiles compared with other 3 PDE5-Is.(14)

Topical agents such as MUSE, Vitaros, vacuum device or intra-cavernosal injection of alprostadil for ED treatment are still 2nd line of choice.(15-17) However the safety profile of combination use with PDE5-Is is not yet confirmed and is not recommended. Vascular surgery is only indicated in selective patients with confirmed proximal artery stenosis.(18) Penile prosthesis implantation is the last choice for who are nonresponders to above modalities. Antibiotic impregnated prosthesis (InhibiZone or Titan Coloplast penile implants) is beneficial to patients who are immuno-compromised and vulnerable to infection.(19-21)

There are some novel pharmacotherapeutic approaches using different mechanism of action including melanocortins and Rho-kinase inhibitors as well as the introduction of gene therapy, stem cell therapy and tissue engineering.(22-24) Although preliminary data have demonstrated efficacy in animal as well as early human trials, but further large scale randomized clinical trials are necessary to confirm their safety and efficacy profiles. Recently low-intensity shock wave therapy has been used to improve erectile function. But owing to lack of standardized procedure/protocol and long term efficacy/safety data, its use in ED treatment is still empirical.(25)

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Main 10 works for sexually transmitted infections in recent years:

1. R. Hamasuna, H. Tsukino. Sexually transmitted infectious diseases. Urethritis. 「Urogenital Infections」 K.G. Naber, A. J. Schaeffer, C. F. Heyns, T. Matsumoto, D. A. Shosker, T. E. B. Johansen, European Association of Urology edited. 1st edition. 777-803 Grafos, Spain, 2010
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State-of-Art Lectures I

Recent Advancement in Genitourinary Tract Infection/ Inflammation: Asian Guideline on Sexually Transmitted Disease

Ryoichi Hamasuna, MD, PhD
Department of Urology, University of Occupational and Environmental Health, Japan
Committee members for STI guideline of UAA/AAUS

Urological Association of Asia (UAA) requested us, Asian Association of UTI and STI (AAUS), to make the guideline of sexually transmitted infections (STIs) for Asian urologists. In some Asian countries, such as Japan or Korea, urologists commonly examine patients with STIs especially urethritis. However, the process has been difficult, because Asia has a lot of countries with different cultures, religions, economies or medical systems. The deadline of this project is this September and we can show you the preliminary recommendation for the treatment of male urethritis.

We have two big problems to make this guideline. The first one is the antimicrobial resistance of Neisseria gonorrhoeae in the world. The prevalence of antimicrobial-resistance in N. gonorrhoeae strains is very high in Asian countries, especially to penicillin, fluoroquinolone, oral cephalosporin or macrolide. In addition, N. gonorrhoeae is also detected from the pharynx of patients with gonococcal urethritis and cervicitis. This means that we have to use appropriate dosages of antimicrobials for both the genital and pharyngeal infection of N. gonorrhoeae. Regimens with ceftriaxone can be recommended for initial treatment of gonococcal infection and we recommend to use high dose of ceftriaxone such as 1g div. The CDC guideline of USA recommends 250 mg of ceftriaxone im. We do not think low dose of ceftriaxone is effective, but high-dose of ceftriaxone is not accepted in some Asian countries for gonococcal infection. We have to discuss the available antimicrobials for all Asian countries.

The second issue is the treatment for Mycoplasma genitalium urethritis. M. genitalium is the third pathogens for male urethritis. However, in almost countries, it can be treated without examination by the antimicrobials which are effective to Chlamydia trachomatis such as azithromycin or doxycycline. Recently, azithromycin-resistant M. genitalium emerged and are spreading in the world. If the treatment with azithromycin are failed, moxifloxacin, one of respiratory fluoroquinolone is available. In addition, moxifloxacin-resistant strains emerged and it would be difficult to treat M. genitalium urethritis in the future.

State-of-Art Lectures I

Updates and Perspectives in the Medical Treatment of Metastatic Castration-resistant Prostate Cancer

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Taipei Veterans General Hospital

Metastatic castration-resistant prostate cancer (MCRPC) is a significant challenge to uro-oncologists nowadays. MCRPC causes 258,400 deaths annually worldwide [1]. The disease has a typical development process in associated with a general deterioration of health condition and occurring of symptoms. Patients at this status usually have life expectation of 24 to 48 months [2]. The recent mainstay of treatment is the use of sequential therapies. Prior to 2010, the only approved systemic treatment option to show significant survival benefit is docetaxel [3]. After 2010, there have been 5 more protocols demonstrating significant survival available to be used in sequence [4]. Abiraterone acetate is a prodrug of abiraterone, a specific inhibitor of cytochrome P450 c17 enzyme complex essential to androgen production. Therefore, the androgens produced from testicular, extragonadal, and tumor androgen biosynthesis is globally blocked [5]. Treatment with abiraterone and prednisone showed a significant increase of survival time as compared with placebo plus prednisone after administration of chemotherapy. However, in chemo-naïve patients, using abiraterone acetate plus prednisone prevented the onset of symptoms, and improved life quality. In a recent randomized phase 3 trial with a median follow-up of more than 4 years, administration of abiraterone acetate extended overall survival compared with prednisone alone. The results support the favorable safety profile of abiraterone acetate in patients with chemo-naïve metastatic castration-resistant prostate cancer [6]. In this review, I will briefly summarize the recent update in options of medical treatment for MCRPC.

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State-of-Art Lectures II

Practical Tips to Optimize Treatment for Premature Ejaculation with Dapoxetine

Bang-Ping Jiann

Premature ejaculation (PE) is a common male sexual dysfunction. Dapoxetine, a short-acting selective serotonin-reuptake inhibitor, is the only oral medication approved for treatment of PE in Taiwan which demonstrates an efficacious way of improving distress in men with PE with good safety profile in clinical trials. There are 5 tips to optimize treatment for PE with dapoxetine in clinical practice.

1. Screening for cormobid ED. ED is the most common cormobid of men with PE(32%–45%) and is underreported by patient. When evaluating the efficacy of PE treatment, a patient's penis has to maintain an erection until ejaculation. The COUPLE study supports a synergestic effect and safety of combined treatment of dapoxetine with PDE5 inhibitor. It is recommended to screen for ED in men with PE and vice versa.

2. Scheduled follow-up visits. Follow-u visit offering an opportunity for physician to inquire about treatment response to and satisfaction with the treatment and treatment emergent adverse events. The interval between initial and follow-up visit depend on sexual frequency, usually 1-month interval which allows patient to make sufficient sexual attempts.

3. Escalating treatment doses. The recommended starting dose of dapoxetine is 30 mg. A substantial part of patient required a higher dose of 60 mg because of insufficient response to 30 mg.

4. Making more sexual attempts. PE is associated with some psychosocial factors such as immature sexual technique, and low frequency of sexual activity. Making more sexual attempts may improve dapoxetine treatment outcome. It is recommended to start with 6 doses of dapoxetine for new PE patient.

5. Integrating female partners into treatment. PE causes distress in female partner and increased risk of female sexual dysfunction of partner within the couple. Partner plays a key supportive role in the man's seeking treatment and in successful long-term therapy for sexual dysfunction. It is helpful in integrating partner the female partner into evaluation, treatment discussion and monitoring the treatment response.

State-of-Art Lectures II

Updates and Perspectives in Male Infertility

吳建志醫師
臺北醫學大學附設醫院泌尿科

The definition of infertility in a couple is generally recognized as the inability to achieve conception despite of frequent unprotected intercourse at least a one-year duration. The attributed factors were 20% to male, 38% to female, 27% to both partners with causal factors identified, however 15% could not be satisfactorily attributed to either partner (according to a 1982 to 1985 WHO multicenter study).

The main causes of male infertility are classified as follows:

- Pre-testicular disorders (accounts for about 1～2%)
  - hypothalamic/pituitary diseases
  - secondary hypogonadism
- Testicular diseases (accounts for about 30～40%)
  - primary spermatogenesis failure and hypogonadism
  - non-obstructive azoospermia or severe oligoasthenoteratozoospermia
- Post-testicular defects (accounts for about 10～20%)
  - disorders of sperm transport
  - obstructive azoospermia
  - including vas def defect, ejaculatory duct obstruction
- Non-classifiable (accounts for about 40～50%)
  - idiopathic factors
  - including erection problems, ejaculation disorders……
  - genetic or epigenetic defects that have not yet been identified

Summary of Update Information about Male infertility

- 2014 American Urological Association (AUA) Guideline for Evaluation and Treatment of Cryptorchidism:
  - Providers should not use hormonal therapy to induce testicular descent as evidence shows low response rates and lack of evidence for long-term efficacy. (Standard; Evidence Strength: Grade B)
  - In the absence of spontaneous testicular descent by six months, specialists should perform surgery within the next year.
- Assessment and, if necessary, treatment of the spouse (the female partner) should be initiated in the same time.
- Specific treatment for male infertility includes:
  - dopamine agonists for prolactin-secreting pituitary tumors
  - for men with hypogonadotropic hypogonadism, exogenous luteinizing hormone (LH) to increase serum and intra-testicular testosterone and, in some cases, exogenous follicle-stimulating hormone (FSH) to enhance spermatogenesis.

- Using multiple advanced surgical techniques, more extensive range of seminal duct obstruction was accessible and correctable; a favorable patency and pregnancy rate can be achieved for properly selected patients with acquired obstructive azoospermia.
- The efficacy of varicocele ligation for sperm quality improvement is still conflicting. However, for young patients with prominent varicocele (Grade III/III) and no testicular atrophy, it may be useful and considerable.
- Assisted reproductive technology (ART) is used for the treatment of male infertility in most patients in spite of any correctable etiology.
- Intra-cytoplasmic injection of spermatozoa (ICSI) into the oocyte is the most common technique used in ART. Pregnancy and live birth rates are similar to natural conception.
- Testicular sperm extraction (TESE) would be able to harvest adequate number of spermatozoa to do ICSI and subsequent pregnancy for patients with non-obstructive azoospermia (NOA), even in patients with Klinefelter's syndrome, which was previously considered to be hopeless to father a child.
- The efficiency of sperm retrieval in azoospermia due to spermatogenic failure varies according to the method of sperm acquisition. Micro-TESE should be the method of choice because it not only increases the chance of retrieving testicular sperm for ICSI but also minimizes testicular damage.
- For couples with chromosomal abnormality and Y chromosome microdeletions considering ICSI, pre-treatment counseling on the potential risk of transmitting sex-chromosome aberrations and fertility problems to their offspring should be always arranged. (Grade 2C)

Future Perspectives for Male infertility

Biotechnology techniques, including sperm derivation and haploidization, have been investigated as an alternative to rescue fertility in men whose germ cells are completely lacking or present only in immature forms. Although, at present, these methods remain largely experimental and still require extensive research, which should address ethical and biosafety issues, such as gamete epigenetic status, ploidy, and chromatin integrity, they can become however, a valuable tool for rescuing fertility while maintaining biological fatherhood.

State-of-Art Lectures II

Updates and Perspectives in the Medical Treatment of BPH/LUTS

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We provide an update on recent developments regarding the medical management of benign prostatic hyperplasia (BPH)/male lower urinary tract symptoms (LUTS). The recent literature refines our knowledge on current therapeutic options and provides further evidence for an individualized, risk-adapted approach for male LUTS mainly depending on symptoms status, comorbidities (i.e. erectile dysfunction; ED) and risk of disease progression [1].

α1-adrenergic receptor antagonists are commonly used to treat BPH/LUTS. With no changes in side effects, 8mg doxazosin XL treatment is an efficient choice for patients who did not have an adequate response to 4mg doxazosin XL treatment [2]. Silodosin is a novel α1-adrenergic receptor antagonist whose affinity for the α1A-adrenergic receptor is greater than that for the α1B-adrenergic receptor. Silodosin was more effective than placebo in improving all the International Prostate Symptom Score (IPSS)-related parameters in all patients subgroups, whereas adverse events (AEs) were similar. Notably, cardiovascular AEs were not higher in patients taking antihypertensive drugs or with mild renal function impairment. Discontinuation rates due to AEs were lower in elderly patients [3].

Men reporting mixed storage and voiding LUTS often experience persisting storage LUTS after initial treatment. Combination therapy of an α-adrenergic antagonist and an antimuscarinic is increasingly recognized as a therapy option. Clinical trials have combined tamsulosin (0.4mg) with different doses of solifenacin. In the SATURN study, greater efficacy benefits were observed for moderate to severe storage symptoms [4]. Single tablet administration may offer improved compliance. Accordingly, the NEPTUNE study researched fixed-dose combination (FDC) therapy for mixed LUTS, using tamsulosin (oral controlled administration system formulation), with solifenacin (6 or 9 mg). The FDC containing tamsulosin and solifenacin 6mg improved storage and voiding LUTS, with no additional benefit from the higher solifenacin dose. During the open-label extension study, symptom improvement was maintained. AEs reflected the known effects of the component therapies. Acute urinary retention, an adverse event of special interest, was seen in only a small number of treated men [5].

Mirabegron, the first β3-adrenoceptor agonist introduced for use in clinical practice, differs from antimuscarinic agents in terms of mechanism of action. Mirabegron administered at daily doses of 25mg, 50mg, and 100mg demonstrated significant improvements in micturition frequency, urgency incontinence, and mean volume

voided/micturition as early as the first assessment, and these were maintained throughout the treatment course. The most common AEs observed with mirabegron in clinical trials were hypertension, nasopharyngitis, and urinary tract infection. The incidence of dry mouth was similar to that with placebo, between 3- and 5-fold lower than with 4mg tolterodine extended release. The benefit of mirabegron (at doses of 50mg and 100mg) was also evident in elderly patients and in both treatment-naive patients and those who previously discontinued antimuscarinic therapy. Mirabegron can also be used in combination with antimuscarinics or in addition to alpha blockers. Mirabegron may quickly become a standard treatment of overactive bladder syndrome [6].

The combination of α-blocker and 5α-reductase inhibitors (5ARIs) remains a well-established concept for BPH/LUTS patients with an enhanced risk of disease progression. A multicenter, randomized, open-label, parallel-group study (NCT01294592) investigate whether a fixed-dose combination (FDC) of 0.5mg dutasteride and 0.4mg tamsulosin is more effective than watchful waiting with protocol-defined initiation of tamsulosin therapy if symptoms did not improve (WW-All) in treatment-naïve men with moderately symptomatic benign prostatic hyperplasia (BPH) at risk of progression [7]. 742 men with an IPSS of 8-19, prostate volume ≥30mL and total serum PSA level of ≥1.5ng/mL were randomized. FDC therapy with dutasteride and tamsulosin, plus lifestyle advice, resulted in rapid and sustained improvements in men with moderate BPH symptoms at risk of progression with significantly greater symptom and QoL improvements and a significantly reduced risk of BPH progression compared with watchful waiting plus initiation of tamsulosin as per protocol.

Tadalafil 5mg/day monotherapy is a valid option particularly for men with LUTS and erectile dysfunction; the combination of Tadalafil 5mg/day with a 5ARI is an interesting approach. Tadalafil 5mg once-daily led to clinically meaningful improvement in approximately two-thirds of men with LUTS/BPH. Among this group of tadalafil-treated responders, over half achieved clinically meaningful improvement after 1 week of therapy; over 70% did so within 4 weeks [8]. In an integrated analysis of storage and voiding IPSS from four randomised controlled trials, improvements during treatment with tadalafil apply to both storage and voiding symptoms at a constant ratio. The extent of storage dysfunction before treatment did not affect the response to treatment [9].

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Lunch Symposium

Penile Rehabilitation with PDE5 Inhibitors in Men Following Radical Prostatectomy

簡邦平醫師

Post-radical prostatectomy (RP) erectile dysfunction (ED) remains a challenge for the urologist. Despite the improvements in surgical technique, ED occurs between 20% and 90% in patients treated with bilateral nerve-sparing RP. Patient factors, cancer selection, type of surgery, surgical techniques, and surgeon factors represent the key significant contributors to erectile function recovery.

The aim of a penile rehabilitation program is to preserve the functional smooth-muscle content of the corpus cavernosum during the neuropraxia period. Phosphodiesterase type 5 (PDE5) inhibitors are commonly used in rehabilitation programs. In animal models, such an approach could promote erectile function recovery, improve smooth muscle-to-collagen penile ration, reduce penile apoptotic index, preserve penile endothelial function and promote neuroprotection during nerve damage. Despite the strong basic science support from animal studies, discordant results have been reached in humans. The previous randomized trials comparing chronic versus on-demand PDE-5 inhibitors use after RP may be affected by improper patients selection in that only men at low risk of postoperative ED were included. These patients would recover erectile function regardless of the type of PDE5 inhibitor administration because of their excellent baseline profile. Prospective, randomized trials have shown a significant benefit of daily PDE5-I administration as compared with placebo in terms of postoperative EF recovery. Patients with intermediate risk of ED after surgery are the best candidates for daily treatment with PDE5 inhibitor after bilateral nerve-sparing RP. The maximal effect of penile rehabilitation may be found in those men with a certain (but not high) degree of systemic and erectile impairment preoperatively.

In conclusion, penile rehabilitation could achieve faster and better natural erectile function after RP and should be started as early as possible. Chronic use of PDE5-I may confer the maximal gain as compared to the on-demand administration schedule. Attention should be pained to the observation that rehabilitation protocols are beneficial even in men with spontaneous erections postoperatively because further improvement in such patients was reported.

Round Table 1

Current and Alternative Management of Late-onset Hypogonadism Testosterone Replacement Therapy (TRT)

劉家駒 醫師
高雄醫學大學附設中和紀念醫院 泌尿科
高雄醫學大學 醫學院 醫學系 泌尿學科
行政院 衛生福利部 屏東醫院 泌尿科

Round Table: Current and Alternative Management of Late-onset Hypogonadism Testosterone Replacement Therapy (TRT)

劉家駒 醫師
CHIA-CHU LIU MD, PhD

高雄醫學大學附設中和紀念醫院 泌尿科
高雄醫學大學 醫學院 醫學系 泌尿學科
行政院 衛生福利部 屏東醫院 泌尿科

INTRODUCTION:

- **Testosterone (T) in healthy men reaches its highest levels at approximately age 30, after which it starts to gradually decline at a rate of 1% to 2% annually.**
- **In addition to decreased quality of life, testosterone deficiency has been associated with increased risks for comorbid diseases including the ED, metabolic syndrome, DM, osteoporosis and bone fracture, and cardiovascular disease.**

(Liu et al, J Sex Med 2009)

- **In past 2 decades, a significant increase in the number of prescriptions for TRT was witnessed. (nearly 500% increase)**

(Bassil et al, Ther Clin Risk Manag. 2009)

SYMPTOMATIC ANDROGEN DEFICIENCY

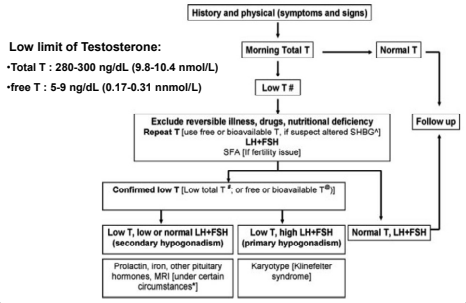
Recommendation from Endocrine Society in 2010

- **Making a diagnosis only in men with consistent symptoms and signs and unequivocally low serum testosterone levels.**

(Bhasun et al, J Clin Endocrinol Metab 2010;95: 2536-2559)

DIAGNOSTIC APPROACH:

Recommendation from Endocrine Society in 2010



LATE ONSET HYPOGONADISM

ISSAM,EAU,ISA,EAA,ASA Recommendations in 2009

- **A clinical and biochemical syndrome associated with advancing age and characterized by symptoms and a deficiency in serum testosterone levels (below the young healthy adult male reference range).**
- **Also referred to as age-associated testosterone deficiency syndrome (TDS)**

(Wang et al, Eur Urol 2009;55:121-130)

EVALUATION

ISSAM,EAU,ISA,EAA,ASA Recommendations in 2009

Clinical Practice:

- **TT> 350 ng/dL: Not require TRT**
- **TT< 230 ng/dL: True hypogonadism**
  Usually benefit from TRT
- **TT: 230-350 ng/dL: Grey zone**
  Need repeated check TT, and consider FT or Bioavailable T
  FT< 65 pg/ml: suggest TRT
  Threshold values of bioavailable T: not generally available

(Wang et al, Eur Urol 2009;55:121-130)

- **A trial of TRT for 3 months can be considered after excluding other causes.**

(Morales et al, Eur Urol 2014)
(Black et al, BJU Int 2004)

THERAPEUTIC GOALS

Recommendation from ISSAM, EAU, ISA, EAA, ASA in 2009

- **For aging men:**

reach midrange to lower young-adult-male serum T levels

Recommendation from Endocrine Society in 2010

- **For young and middle-age men:**

reach mid-normal range for healthy, young men. (400-700ng/dL)

- **For older men:**

reach lower part of the normal range of young men. (400-500 ng/dL)

- **For men with desiring fertility:** against

Potential Benefits of TRT

EVIDENCE-BASED EFFICACY OF TRT

Potential benefits

- Libido and erection function restoration
- Energy increasing
- Mood improvement
- Body composition improvement
- Bone mineral density stabilization/increasing

Physical
Psychological
Sexual

AACE Hypogonadism Task Force. Endocr Pract 2002;8:439-56.
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Testosterone Supplementation and Sexual Function: A Meta-Analysis Study

Giovanni Corona, MD,* Andrea M. Isidori, MD,† Jaques Buvat, MD,‡ Antonio Aversa, MD,†
Giulia Rastrelli, MD,§ Geoff Hackett, MD,¶ Vincenzo Rochira, MD,** Alessandra Sforza, MD,*
Andrea Lenzi, MD,† Edoardo Mannucci, MD,†† and Mario Maggi, MD§

An extensive Medline, Embase, and Cochrane search was performed from January 1, 1969 up to July 1, 2013.

Testosterone supplementation (TS) vs placebo

- **A total of 29 randomized placebo-controlled trials were included.**
- **n=1,930 subjects with a mean follow-up of 27 weeks.**

TS+ PDE5i vs Placbo+ PDE5is

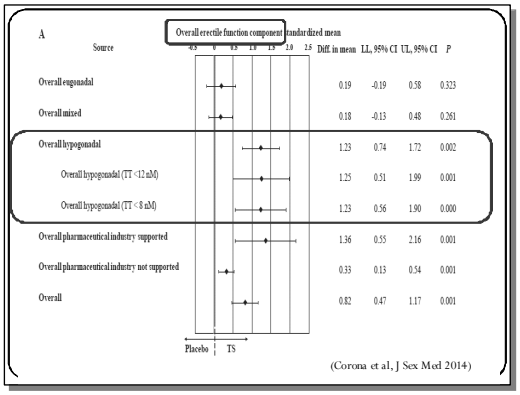
- **A total of 5 randomized placebo-controlled trials were included.**

PDE5is on sexual function before and after TS

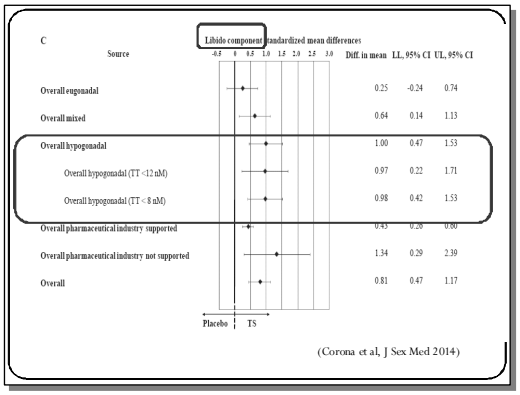
- **A total of 7 uncontrolled studies were included.**

➢ **n=894 subjects with a mean follow-up of 12 weeks.**

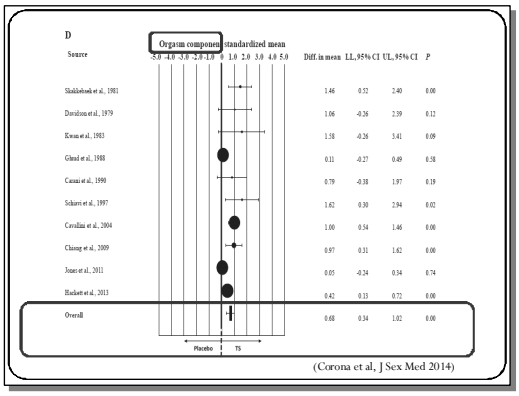
(Corona et al, J Sex Med 2014)



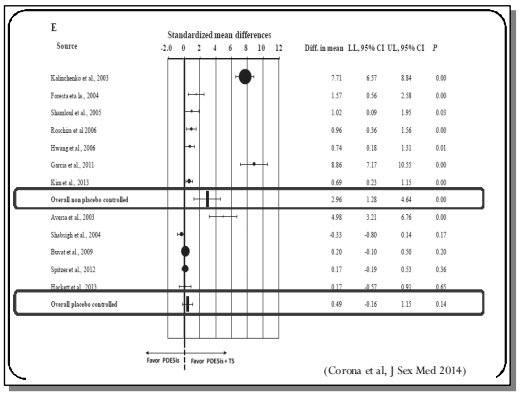
(Corona et al, J Sex Med 2014)



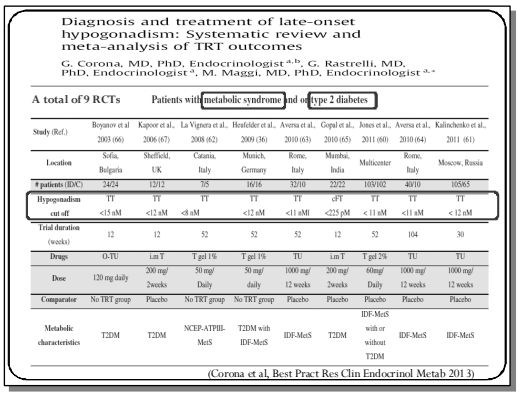
(Corona et al, J Sex Med 2014)



(Corona et al, J Sex Med 2014)



(Corona et al, J Sex Med 2014)



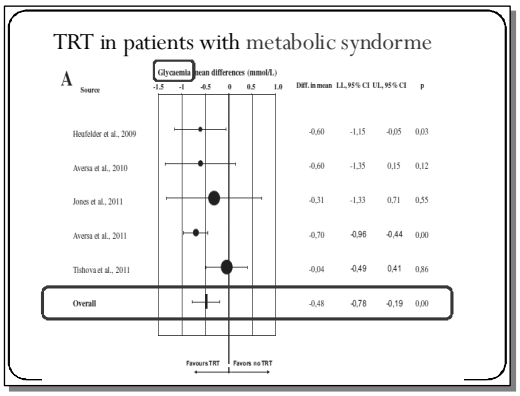
Diagnosis and treatment of late-onset hypogonadism: Systematic review and meta-analysis of TRT outcomes

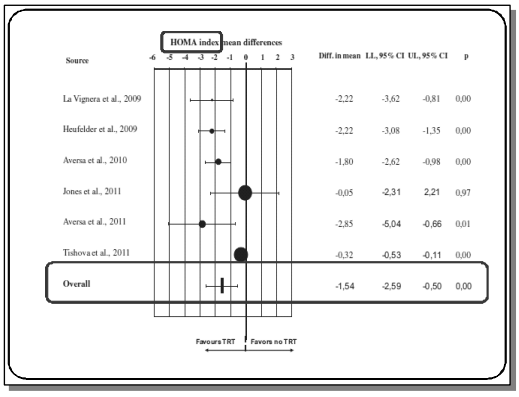
G. Corona, MD, PhD, Endocrinologist [a,b], G. Rastrelli, MD, PhD, Endocrinologist [a], M. Maggi, MD, PhD, Endocrinologist [a,*]

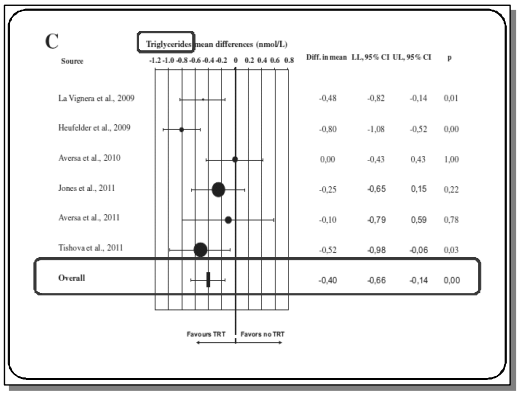
A total of 9 RCTs Patients with metabolic syndrome and or type 2 diabetes

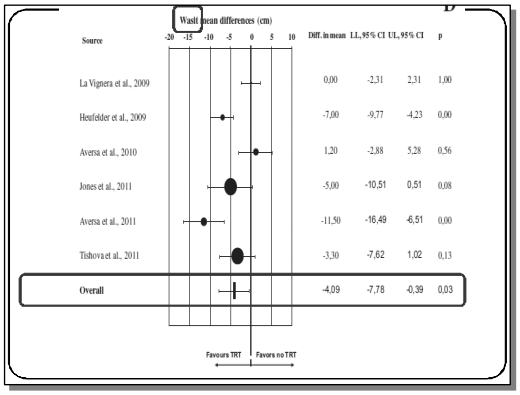
Study (Ref.)	Boyanov et al 2003 (66)	Kapoor et al., 2006 (67)	La Vignera et al., 2008 (62)	Heufelder et al., 2009 (36)	Aversa et al., 2010 (63)	Gopal et al., 2010 (65)	Jones et al., 2011 (60)	Aversa et al., 2010 (64)	Kalinchenko et al., 2011 (61)
Location	Sofia, Bulgaria	Sheffield, UK	Catania, Italy	Munich, Germany	Rome, Italy	Mumbai, India	Multicenter	Rome, Italy	Moscow, Russia
# patients (ID/C)	24/24	12/12	7/5	16/16	32/10	22/22	103/102	40/10	105/65
Hypogonadism cut off	TT <15 nM	TT <12 nM	TT <8 nM	TT <12 nM	TT <11 nMl	cFT <225 pM	TT < 11 nM	TT <11 nM	TT < 12 nM
Trial duration (weeks)	12	12	52	52	52	12	52	104	30
Drugs	O-TU	i.m T	T gel 1%	T gel 1%	TU	i.m T	T gel 2%	TU	TU
Dose	120 mg daily	200 mg/ 2weeks	50 mg/ Daily	50 mg/ daily	1000 mg/ 12 weeks	200 mg/ 2weeks	60mg/ Daily	1000 mg/ 12 weeks	1000 mg/ 12 weeks
Comparator	No TRT group	Placebo	No TRT group	No TRT group	Placebo	Placebo	Placebo	Placebo	Placebo
Metabolic characteristics	T2DM	T2DM	NCEP-ATPIII-MetS	T2DM with IDF-MetS	IDF-MetS	T2DM	IDF-MetS with or without T2DM	IDF-MetS	IDF-MetS

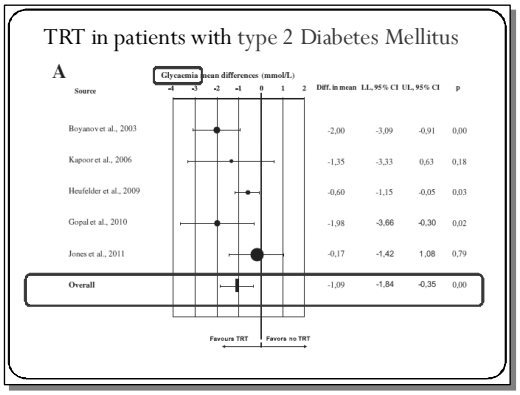
(Corona et al, Best Pract Res Clin Endocrinol Metab 201 3)

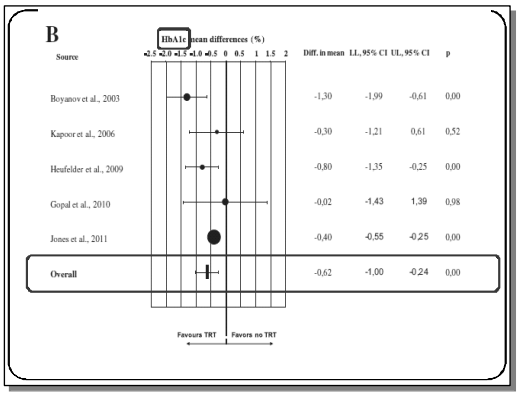


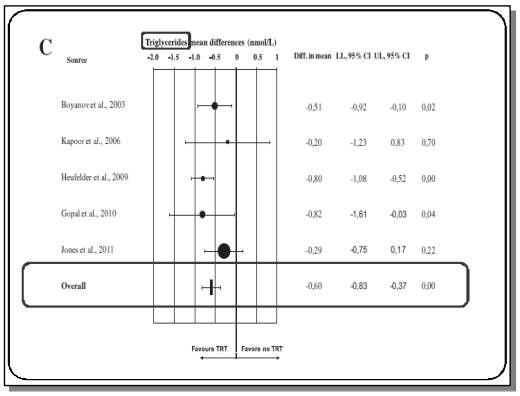












Potential risks of TRT

Cardiovascular risk ?
Risk of prostate cancer?
Progression of BPH ?

Cardiovascular risk associated with testosterone-boosting medications: a systematic review and meta-analysis

Giovanni Corona, Elisa Maseroli, Giulia Rastrelli, Andrea M Isidori, Alessandra Sforza, Edoardo Mannucci & Mario Maggi[1]

- **An extensive Medline, Embase and Cochrane search was performed from January 1969 up to January 2014.**
- **A total of 75 randomized placebo-controlled trials were included.**
- **3016 patients were randomized to TRT and 2448 to placebo group.**
- **Mean trial duration: 34.8 weeks.**
- **The mean age: 59.9 years**
- **The mean baseline T : 11.2 nmol/l**

(Corona et al, Expert Opin Drug Saf 2014)

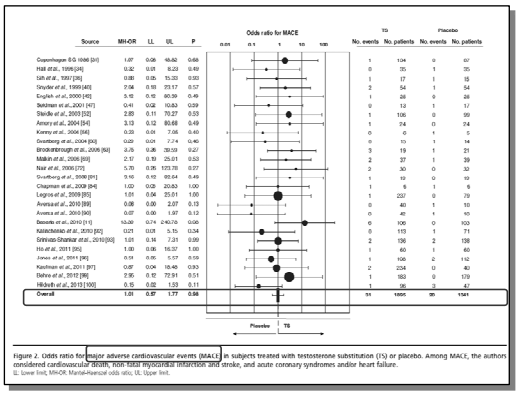
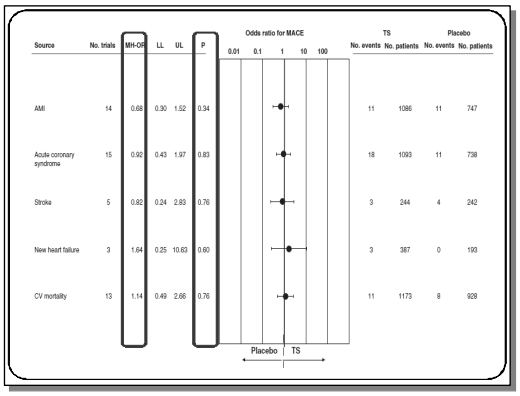
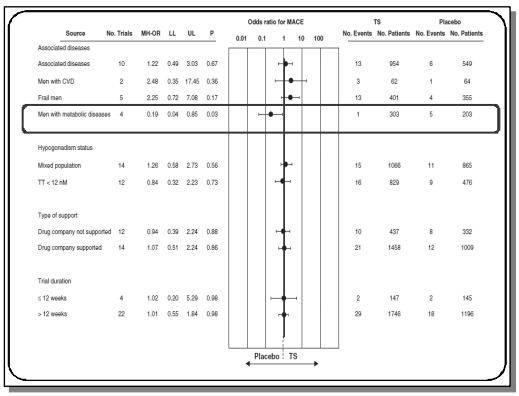
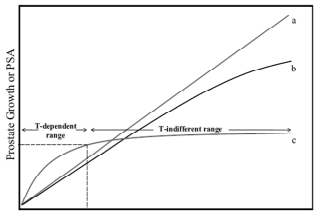


Figure 2. Odds ratio for major adverse cardiovascular events (MACE) in subjects treated with testosterone substitution (TS) or placebo. Among MACE, the authors considered cardiovascular death, non-fatal myocardial infarction and stroke, and acute coronary syndromes and/or heart failure.
LL: Lower limit; MH-OR: Mantel-Haenszel odds ratio; UL: Upper limit.





Saturation model of prostate growth with serum testosterone concentration



- **The saturation point : about 150–200 ng/dl**

(Morgentaler et al,J Urol 2009)
(Morgentaler et al, Eur Urol 2009)
(Dupree et al, Nat. Rev. Urol.2014)

The effect of testosterone replacement therapy on prostate cancer: a systematic review and meta-analysis

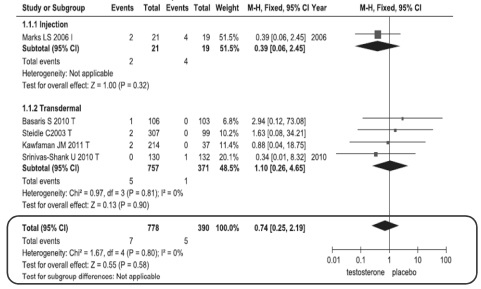
Y Cui, H Zong, H Yan and Y Zhang

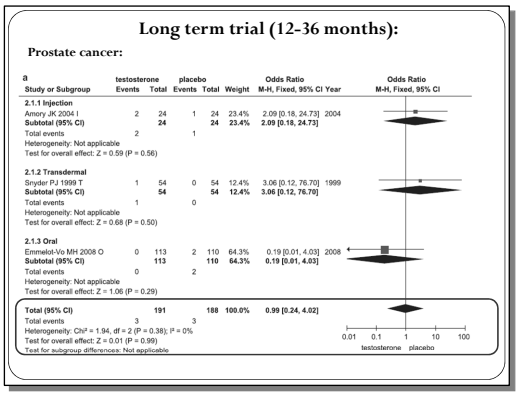
- **Medline (1966 to Augest 2013), Embase (1974 to Augest 2013) and Cochrane Controlled Trials Register databases were searched.**
- **A total of 22 randomized placebo-controlled trials (RCTs) were included in the analysis: (N=2351)**
  - **11 RCTs compared testosterone with a placebo over the short term (<12 months).**
  - **11 RCTs compared testosterone with a placebo over the long term (12–36 months).**

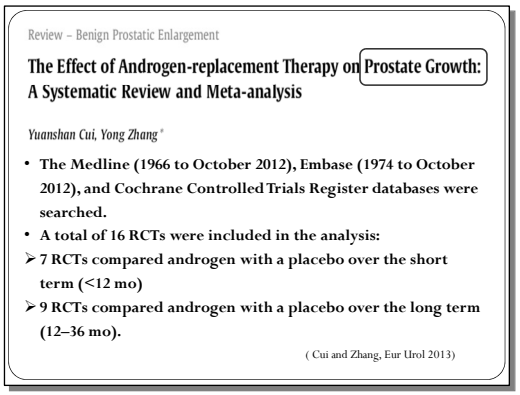
(Cui et al, Prostate Cancer Prostatic Dis 2014)

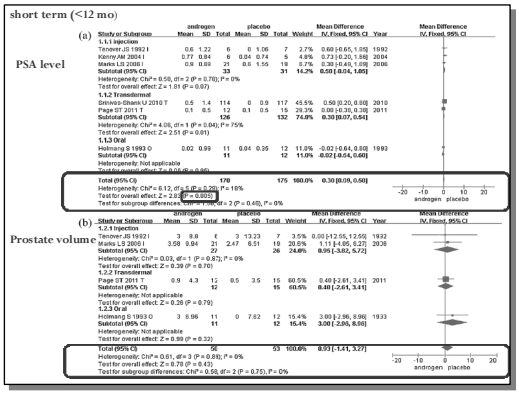
Short term trial (<12 months):

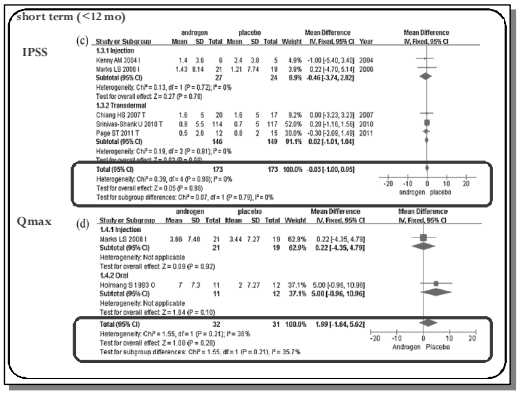
Prostate cancer:

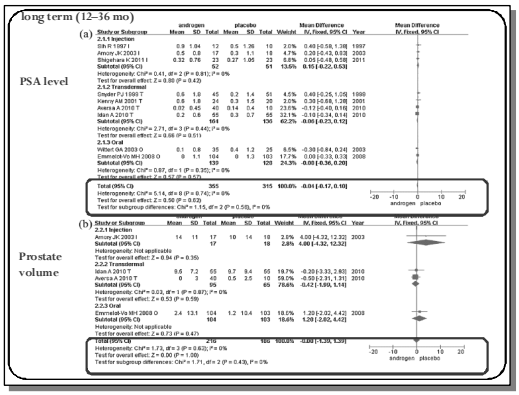


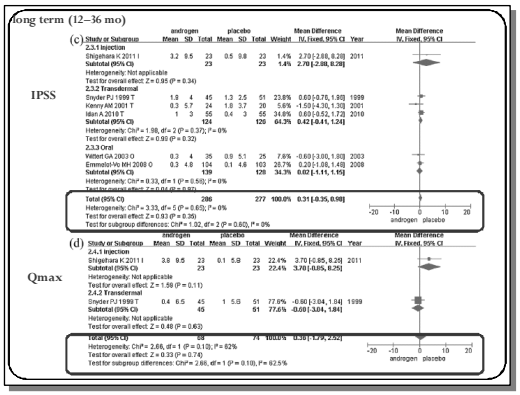

Long term trial (12-36 months):
Prostate cancer:
testosterone
placebo
Odds Ratio
Odds Ratio
Study or Subgroup
Events Total Events Total Weight M-H, Fixed, 95% CI Year
M-H, Fixed, 95% CI
2.1.1 Injection
Amory JK 2004 I 2 24 1 24 23.4% 2.09 [0.18, 24.73] 2004
Subtotal (95% CI) 24 24 23.4% 2.09 [0.18, 24.73]
Total events 2 1
Heterogeneity: Not applicable
Test for overall effect: Z = 0.59 (P = 0.56)
2.1.2 Transdermal
Snyder PJ 1999 T 1 54 0 54 12.4% 3.06 [0.12, 76.70] 1999
Subtotal (95% CI) 54 54 12.4% 3.06 [0.12, 76.70]
Total events 1 0
Heterogeneity: Not applicable
Test for overall effect: Z = 0.68 (P = 0.50)
2.1.3 Oral
Emmelot-Vo MH 2008 O 0 113 2 110 64.3% 0.19 [0.01, 4.03] 2008
Subtotal (95% CI) 113 110 64.3% 0.19 [0.01, 4.03]
Total events 0 2
Heterogeneity: Not applicable
Test for overall effect: Z = 1.06 (P = 0.29)
Total (95% CI) 191 188 100.0% 0.99 [0.24, 4.02]
Total events 3 3
Heterogeneity: Chi² = 1.94, df = 2 (P = 0.38); I² = 0%
Test for overall effect: Z = 0.01 (P = 0.99)
Test for subgroup differences: Not applicable
0.01 0.1 1 10 100
testosterone placebo

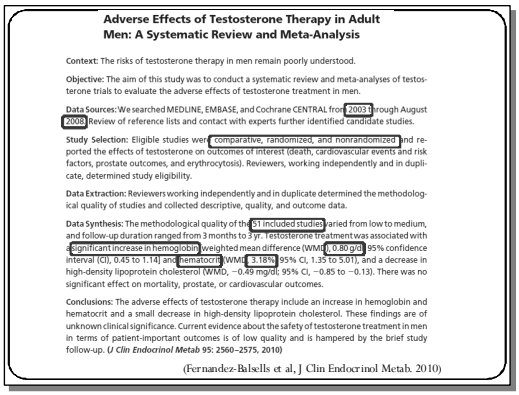

Review – Benign Prostatic Enlargement
The Effect of Androgen-replacement Therapy on Prostate Growth: A Systematic Review and Meta-analysis
Yuanshan Cui, Yong Zhang
• The Medline (1966 to October 2012), Embase (1974 to October 2012), and Cochrane Controlled Trials Register databases were searched.
• A total of 16 RCTs were included in the analysis:
➢ 7 RCTs compared androgen with a placebo over the short term (<12 mo)
➢ 9 RCTs compared androgen with a placebo over the long term (12–36 mo).
(Cui and Zhang, Eur Urol 2013)


short term (<12 mo)
PSA level
Prostate volume
androgen
placebo
Mean Difference
Mean Difference
androgen placebo


short term (<12 mo)
IPSS
Qmax
androgen
placebo
Mean Difference
Mean Difference
Androgen Placebo


long term (12–36 mo)
PSA level
Prostate volume
androgen
placebo
Mean Difference
Mean Difference
androgen placebo


long term (12–36 mo)
IPSS
Qmax
androgen
placebo
Mean Difference
Mean Difference
androgen placebo



Adverse Effects of Testosterone Therapy in Adult Men: A Systematic Review and Meta-Analysis

Context: The risks of testosterone therapy in men remain poorly understood.

Objective: The aim of this study was to conduct a systematic review and meta-analyses of testosterone trials to evaluate the adverse effects of testosterone treatment in men.

Data Sources: We searched MEDLINE, EMBASE, and Cochrane CENTRAL from 2003 through August 2008. Review of reference lists and contact with experts further identified candidate studies.

Study Selection: Eligible studies were comparative, randomized, and nonrandomized and reported the effects of testosterone on outcomes of interest (death, cardiovascular events and risk factors, prostate outcomes, and erythrocytosis). Reviewers, working independently and in duplicate, determined study eligibility.

Data Extraction: Reviewers working independently and in duplicate determined the methodological quality of studies and collected descriptive, quality, and outcome data.

Data Synthesis: The methodological quality of the 51 included studies varied from low to medium, and follow-up duration ranged from 3 months to 3 yr. Testosterone treatment was associated with a significant increase in hemoglobin (weighted mean difference (WMD), 0.80 g/dl; 95% confidence interval (CI), 0.45 to 1.14] and hematocrit (WMD, 3.18%; 95% CI, 1.35 to 5.01), and a decrease in high-density lipoprotein cholesterol (WMD, −0.49 mg/dl; 95% CI, −0.85 to −0.13). There was no significant effect on mortality, prostate, or cardiovascular outcomes.

Conclusions: The adverse effects of testosterone therapy include an increase in hemoglobin and hematocrit and a small decrease in high-density lipoprotein cholesterol. These findings are of unknown clinical significance. Current evidence about the safety of testosterone treatment in men in terms of patient-important outcomes is of low quality and is hampered by the brief study follow-up. *J Clin Endocrinol Metab* 95: 2560–2575, 2010)

(Fernandez-Balsells et al, J Clin Endocrinol Metab. 2010)

TRT MONITORING

Factors	Frequency	Special comments
DRE	**Baseline, 3, and 6 months Annually then**	**Biopsy if abnormal at baseline and during TRT**
PSA	**Baseline, 3, and 6 months Annually then**	**Consult urologist if > 4.0 ng/mL**
AUA / IPSS score	**Baseline, every 6 to 12 months then**	**Consult urologist if > 19**
OSA/hypoxia	**Baseline, needed then**	**If yes, reduce dose**
Breast examination	**Baseline and follow-up**	
Hgb and Hct	**Baseline, 3, and 6 months Annually then**	**Stop TRT if Hct > 50%**

(Bhasin et al, J Clin Endocrinol Metab 2010)
(Wang et al, Eur Urol 2009)

CONCLUSION (1):

- **Current clinical guidelines suggest TRT should be performed only in men with consistent symptoms and signs and unequivocally low serum testosterone levels.**
- **The potential benefits of TRT in hypogonadal men included restoration of sexual function, improvement of mood and body composition, increasing muscle strengths and bone mineral density, and improvement of metabolic parameters in subjects with commitant DM and/or MetS.**

CONCLUSION (2):

- **Current literature reviews did not support TRT in hypogonadal men will increase risks of cardiovascular diseases, prostate cancer and progression of BPH.**
- **However, TRT would result in a significant increase of hemoglobin and hematocrit levels. It should be kept in mind in clinical practice especially performing TRT in subjects with older age or higher cardiovascular risk.**
- **Further large longitudinal, placebo-controlled, randomized studies are still needed to clarify the real effects of TRT on cardiovascular and prostatic health.**

Round Table 2

Current and Alternative Management of Late-onset Hypogonadism Clomiphene and Tamoxifen

許毓昭醫師
林口長庚醫院泌尿科

The symptoms of low testosterone in men range from lack of energy, depressed mood, loss of vitality, muscle atrophy (sarcopenia), muscles aches, low libido, erectile dysfunction, and weight gain...to bone loss (osteopenia), osteoporosis, mild anemia, increased risk of Alzheimer's, increased risk of high-grade prostate cancer, and increased risk of death due to all causes.

Traditionally, if low testosterone is diagnosed, testosterone replacement therapy is prescribed, and it most commonly comes in the form of a cream, gel, pellet, patch, and by injection. And although these types of therapy are effective, some methods are better than others, and there are side-effects with all of them. For example, testicular shrinkage, gynecomastia (breast enlargement), low sperm count/sterility, and polycythemia (overproduction of red blood cells) are common side-effects of testosterone replacement therapy (for many sufferers, these side-effects are mostly treatable or considered "worth it" by the patient).

However, specifically due to the sterility side-effect, such testosterone treatments aren't a good option for men who want to have children. In these (usually young) hypogonadal men, clomiphene citrate has been used for decades to increase testosterone production, increase sperm production, and increase fertility. Both these therapies effectively help signal the testes to produce testosterone and thereby increase testosterone levels.

Tamoxifen is an antagonist of the estrogen receptor via its active metabolite, 4-hydroxytamoxifen. In other tissues such as the endometrium, it behaves as an agonist, and thus may be characterized as a selective estrogen-receptor modulator.

Tamoxifen itself is a prodrug, having relatively little affinity for its target protein, the estrogen receptor. It is metabolized in the liver by the cytochrome P450 isoform CYP2D6 and CYP3A4 into active metabolites such as 4-hydroxytamoxifen (afimoxifene) and N-desmethyl-4-hydroxytamoxifen (endoxifen) which have 30-100 times more affinity with the estrogen receptor than tamoxifen itself. These active metabolites compete with estrogen in the body for binding to the estrogen receptor.

Inclonclusion, Clomiphene and Tamoxifen may be used to treat hypogonadism in some conditions.

Round Table 3

Current and Alternative Management of Late-onset Hypogonadism
Lifestyle Modification Including Diet and Exercise

Chih-Cheng Lu
盧致誠醫師
柳營奇美醫院

There are various alternative management strategies for late-onset hypogonadism (LOH), including lifestyle modification, correction of clinical varicoceles, and elimination of exposure to gonadotoxins.

Exercise may help sustain the positive effects of Testosterone Replacement Therapy (TRT) after treatment ends, according to a study from Korea in 2014. Fifty patients with LOH and similarly sedentary lifestyles were enrolled which included 12 weeks of TRT and 8 weeks of follow-up without therapy. One group was offered a supervised physical activity program concurrent with TRT therapy for the duration of the study while the other received TRT alone. Total serum testosterone levels significantly increased at 12 weeks; even more, greater increases were seen in the exercise group. More patients in the exercise group reported improvements in erectile function.

The serum concentration of sex hormone-binding globulin (SHBG) can affect the biological activity of testosterone. A study from the Massachusetts Male Aging Study in 2000, examined cross-sectional relationships between dietary components and SHBG levels in 1552 men. The results showed that age and body mass index are major determinants of SHBG concentrations in older men, and fiber and protein intake are also significant contributors to SHBG levels, but total caloric intake and the intake of carbohydrate or fat are not significant. Diets low in protein in elderly men may lead to elevated SHBG levels and decreased testosterone bioactivity.

The decrease in bioavailable testosterone results in declines in sexual function and muscle and red cell mass, and contribute to the loss of bone density. Combination of exercise and TRT offers significant improvements in testosterone levels and LOH symptoms, which can be well sustained with continuous exercise even after the cessation of TRT.

References:

1. Testosterone Replacement Therapy in Men: Effects on Fertility and Health. Biennial Review of Infertility, volume 3, 2013. P.31-48.
2. Exercise Improves the Effect of Testosterone Replacement Therapy and the Durability of Response After Cessation of Treatment. Annual Scientific Meeting of the American Urological Association (AUA), Orlando, FL. 2014.
3. Diet and Sex Hormone-Binding Globulin. J Clin Endocrinol Metab 85:293–296, 2000.

Round Table 4

Current and Alternative Management of Late-onset Hypogonadism: Dehydroepiandrosterone (DHEA) and Other Nutritional Supplement

Chen-Hsun Ho, M.D.
Taipei Medical University Shuang-Ho Hospital
New Taipei City, Taiwan

Summary: Late onset hypogonadism (LOH) is a clinical and biochemical syndrome in men with advancing age associated with low testosterone and age-related symptoms. While testosterone replacement therapy has been well established for the management of LOH, investigators have been interested in the alternative supplement. A recent meta-analysis including all placebo-controlled RCTs evaluating the effect of DHEA supplementation on several clinical outcomes revealed that DHEA supplementation was associated with a reduction of fat mass and with a trend toward an increase in lean mass. However, these effects were small and may be explained by adjustment for DHEA-derived metabolites. Besides, there was no additional effect of DHEA supplementation on other metabolic profiles, bone health, sexual function, and quality of life. The effect of some other nutritional supplements has been also investigated, while their roles remain to be determined.

Clinical Debate I

Debate I (Pros)：

Issue 1：Laser Prostatectomy had Lower Rate of Erectile Dysfunction than TURP

Hsin-Chieh Huang
Division of Urology, Department of Surgery, Chang Gung Memorial Hospital

Benign prostatic hyperplasia (BPH) becomes increasingly common as man age. Men with clinically significant lower urinary tract symptoms (LUTS) suggestive of BPH who do not find adequate relief with medical treatment may benefit from transurethral resection or ablation to enlarge the urethral channel to reduce the amount of prostate tissue around the urethra.

Transurethral resection of prostate (TURP) has been the main form of treatment for many years in men with BPH, and remains the standard against which other treatments should be compared. However, the complications and cost associated with TURP have encouraged development of several alternatives methods to remove or destroy prostatic tissues using a variety of energy sources.

Laser prostatectomy techniques have become a popular alternative for transurethral resection of the prostate (TURP) and several reports showed their efficacy with less blood loss and a shorter hospital stay than after TURP. Laser prostatectomy includes two major technical principals, enucleation of the adenoma from the surrounding capsule or laser ablation of the adenoma. The successful relief of LUTS is postulated to favor improving the overall sexual function. However, other factors, including laser-heating effect, is hypothesized to contribute to postoperative erectile dysfunction. Laser prostatectomy using size-related laser energy might have possible negative influence on sexual function than TURP.

Clinical Debate I

Debate I (Cons)：

Issue 1：Laser Prostatectomy had Lower Rate of Erectile Dysfunction than TURP

黃奕燊醫師

前言

攝護腺良性肥大(Benign prostate hyperplasia，BPH) 在老年病患中有相當高的盛行率，而且常常合併勃起功能障礙。治療方面經尿道攝護腺切除手術(transurethral resection of prostate， TURP)目前仍然是歐洲泌尿科醫學會(EAU)及美國泌尿科醫學會(AUA)建議治療方式的首選。文獻顯示病患在接受 TURP 手術後會有 8.3～13.6% 不等的機率會產生勃起功能障礙 (Erectile dysfunction，ED)，特別是術前就有 ED 的病患。然而也有其他文獻顯示 TURP 手術並不會造成病患勃起功能障礙。

與術後勃起功能有關的因子包含病患年紀(patient age)，攝護腺體積(prostate size)，心血管疾病 (Cardiovascular disease)，糖尿病(Diabetes)以及術中攝護腺包膜穿孔(intraoperative capsular perforation)，以上因素均會提高術後 ED 的機率。在手術過程中電流的傳導所產生的熱能都會使得位於攝護腺 5、7 點的神經血管束 (neurovascular bundle 誤ＮＶＢ)受到傷害而造成 ED。

近年來鐳射切除手術逐漸盛行, 除了較不易產生 TUR syndrome 外，病人術後尿流速及餘尿量的改善程度都與傳統 TURP 相當。但是鐳射手術與傳統手術對於勃起功能影響的比較目前仍然沒有大型研究證實熟優熟劣。

攝護腺旁神經血管束與勃起功能

在 1984 年學者發現 cavernous nerve 位於攝護腺包膜 (prostate capsule) 與外側骨盆筋膜之間 (lateral pelvic fascia) 之間。若此神經受到損傷就會阻礙 non-adrenergic non-cholinergic nerve 釋放一氧化氮而不利勃起。Lefaucheur 等學者測量 TURP 術後病患陰莖溫度感受性來評估術後 pudendal nerve 分支神經受損程度，發現溫度閾值明顯上昇，間接證實手術對神經的傷害。另一篇研究在 TURP 術中監測直腸溫度指出攝護腺較小 (< 40 ml) 的病患，術中會有較大溫度變化，對術後勃起功能影響也比較大。

雷射切除前列腺手術與傳統經尿道攝護腺切除手術比較

儘管諸多研究顯示鐳射切除前列腺手術並不會造成勃起功能影響 (Thulium laser, HPS laser, Holmium laser)，似乎在影響勃起功能方面有優於傳統 TURP 的意味，但是大部分隨機對照實驗 (randomized control trial, RCT) 去比較兩者發現並無顯著差異，甚至有些病患接受完手術後勃起功能有改善。然而術後勃起功能障礙不完全是 organic ED，據統計大約 25～35% ED 病患是歸類於 psychogenic ED，而術後使用 PDE5i 有效用的比率約有 86%。

手術方式不管是使用鐳射或是傳統 TURP 對於術後勃起功能無明顯差異，雖然一些病患的確會因為熱能傳導或術中攝護腺包膜穿孔造成勃起功能障礙，但是不可否認有些病患是心因性因素所導致的 ED。若勃起功能受到影響，使用治療勃起功能障礙第一線藥物 PDE5i 也可以得到滿意的效果。

References

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Clinical Debate I

Debate I (Pros)：

Issue 2: Operation vs. Combined Medical Treatment for a 60 Years Men with Large Prostate

王炯瑆醫師
恩主公醫院泌尿科
Chung-Cheng Wang, M.D. PhD.
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Many evidences have showed that monopolar transurethral resection of prostatectomy (M-TURP) is the current surgical standard procedure for men with prostate sizes of 30–80 ml and bothersome moderatetosevereLUTS secondary of benign prostate obstruction. M-TURP provides subjective and objective improvement rates superior to medical or minimally invasive treatments. In 1999, a meta-analysis of 29 RCTs found a mean decrease in LUTS of 70.6% and a mean increase in Qmax by 125% after TURP. Another recent analysis of 20 RCTs with a maximum follow-up of 5 years, M-TURP resulted in a substantial improvement of mean Qmax (+162%) and a significant reduction of mean IPSS (-70%) and mena PVR urine (-77%). These results all support the durable clinical outcome of M-TURP and are superior than those of medical treatment.

A significant change was noted in surgical treatment of benign prostatic hypertrophy (BPH) over the last two decades. Most importantly, laser surgery (coagulation, vaporization, or enucleation) has been growing in popularity as an alternative to standard transurethral prostatectomy or other procedures.

Thulium-YAG (Tm:YAG) laser, a wavelength of approximately 2000nm is emitted in continuous wave mode. Thulium laser prostatectomy had a similar efficacy to standard TURP in terms of IPSS, QoL, Qmax, and PVR, and offered several advantages over TURP in terms of blood transfusion, serum sodium decreased, catheterization time, and hospital stay, while TURP was superior in terms of operation duration. Thus, to our knowledge, although there is no RCT to compare medical treatment with laser prostatectomy, we still can presume that laser prostatectomy is a better choice than medical treatment for a patient with large prostate.

Clinical Debate I

Debate I (Cons)：

Issue 2: Operation vs. Combined Medical Treatment for a 60 Years Men with Large Prostate

Yuh-Shyan Tsai（蔡育賢）
Dept. of Urology, NCKUH, Tainan, Taiwan

Benign prostate enlargement or hyperplasia is a progressive disease that might affect male voiding or storage function of the lower urinary tract mainly after 50 years old. Since bothersome lower urinary tract symptoms (LUTS) varies widely according to the people, the treatment should be individualized, including observation, medical therapy either with single or combined agents, minimal invasive surgery, or prostatectomy. As for maintaining voiding function, the trail focusing on large prostate have proven that combined therapy is an effective and safe method in preventing or diminishing prostate-related occurrence of urinary retention or surgery. Also, several innovative agents have been approved for the treatment of storage-related overactive bladder problem. Moreover, in resolving the bothersome nocturia or nocturnal polyuria, several non-urological causes should be investigated and corrected before considering any invasive surgery. Therefore, for a 60-year-old man with large prostate more than 80 gram, we favored combined medical therapy should be offered first considering surgery.

Clinical Debate II

Debate II (Pros)：

Issue 3: Cialis OAD vs. α-blocker + PDE5 Inhibitor in Men with Concomitant ED and BPH

TSAI, WEI-KUNG
Department of Urology, Mackay Memorial Hospital

PDE5 inhibitors is the first-line treatment for ED, and also the emerging medication for LUTS now. Although three selective oral PDE5 inhibitors (sildenafil, tadalafil, and vardenafil) have been licensed for the treatment of erectile dysfunction, and clinical trials of all of them have been conducted in patients with male LUTS, only tadalafil (Cialis@5 mg once daily) has been licensed for the treatment of male LUTS with or without erectile dysfunction.

With regard to tadalafil 5 mg, it was found significantly to reduce IPSS by 22-37% (4.7-6.6 IPSS points; IPSS points relative to placebo: 2.1-4.4). Both bladder storage and voiding symptoms decreased during treatment with PDE5 inhibitors. Significant LUTS (IPSS) reduction has been documented with tadalafil as early as 1 week after the beginning of treatment. In the latter RCT, not included in the meta-analysis just cited, a statistically significant increase in Q_{max} with tadalafil compared with placebo (+2.4 mL/s) was reported for the first time. Tadalafil had no significant impact on PVR.

The meta-analysis of PDE5 inhibitors suggested that younger men with low body mass index and more severe LUTS profit the most from treatment with PDE5 inhibitors. By the Recommmendation from EAU guideline, Cialis once daily and alpha blockers have the same level of evidance base (1a) and Grade of recommendation (A) to reduce moderate-to-severe (storage and voiding) LUTS in men. Why don't we start Cialis once daily monotherapy for LUTS instead of α-blocker + PDE5 Inhibitor combination?

Epidemiologic data in adult men exhibit a strong relationship between ED and LUTS/BPH. Preclinical evidence suggests that several common pathophysiological mechanisms are involved in the development of both ED and LUTS. Dual efficacy of Cialis once daily can reduce the number of pills needed and is helpful for the patinet's compliance for treatment.

Besides, Taking alpha-blocker and PDE5 inhibitors together may increase the incidence of dizziness and hypotension. Cialis Once daily monotherapy has fewer incidence of side effect than On-Demad PDE5 inhibitors, and also avoids the sexual side efffect of alpha-blocker like ejaculation dysfunction.

Clinical Debate II

Debate II (Cons)：

Issue 3: Cialis OAD vs. α-blocker + PDE5 Inhibitor in Men with Concomitant ED and BPH

梁景堯醫師

There are some advantages for α-blocker + PDE5 inhibitor:

1. Safety: The patient may have an α-blocker as initial treatment, and then add-on PDE5 inhibitors when voiding condition improved.
2. Efficacy: Patients may titer dose or switch into another α-blocker or PED5 inhibitor until they find most effective combination.
3. Cost: Since α-blockers are covered by National Health Insurance, patients may save a lot of money.
4. Flexilibity: When voiding and erection condition improve, patients may fine-tune individual dosage of α-blocker and PDE5 inhibitor.

Conclusion: α-blocker + PDE5 Inhibitor is a favorable option for men with concomitant ED and BPH.

Clinical Debate II

Debate II (Pros)：

Issue 4：Is there an Increased CV Risk after TRT ?

林子平醫師
台北榮總泌尿部

1

Testosterone Increase the Risk of a Cardiovascular Event

台北榮總泌尿部 林子平

2

Testosterone therapy

- Testosterone therapy (TT) for patients with symptomatic testosterone deficiency is recommended by guideline[1]
  - Improve sexual function, bone mineral density, increase free-fat mass and strength
  - Improve lipid profiles, insulin resistance and increase the time to ST depression during stress testing
- Effects of TT on cardiovascular outcomes and mortality are unknown

1.Bhasin, S., et al., J Clin Endocrinol Metab, 2010. **95**(6): p. 2536-59.

3

Several recent studies indicate TT may increase cardiovascular events

- The testosterone in older men with mobility limitations (TOM) trial[1]
- the association of TT with mortality, myocardial infarction and stroke in men with low testosterone levels[2]
- Increased risk of non-fatal myocardial infarction following testosterone therapy prescription in men[3]
- Testosterone therapy and cardiovascular events among men: a systematic review and meta-analysis of placebo-controlled randomized trials[4]

1. Basaria, S., et al. N Engl J Med, 2010. **363**(2): p. 109-22.
2. Vigen, R., et al. JAMA, 2013. **310**(17): p. 1829-36.
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4

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JULY 8, 2010 VOL. 363 NO. 2

Adverse Events Associated with Testosterone Administration

- Study design
  - Parallel-group, randomized, placebo-controlled, double-blind trial involving community-dwelling men
- Study participants
  - Men>65 y/o
  - 100 ng/dL<Total testosterone<350ng/dL or free testosterone<50 pg/mL
  - Limitations in mobility
- Procedures
  - 10g transdermal gel containing
    - placebo control or
    - 100mg of testosterone (Testim 1%, Auxilium Pharmaceuticals)

1. Basaria, S., et al. N Engl J Med. 2010. **363**(2): p. 109-22.

5

The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JULY 8, 2010 VOL. 363 NO. 2

Adverse Events Associated with Testosterone Administration

- Primary efficacy outcome
  - Maximal voluntary muscle strength in a leg-press exercise
- Secondary efficacy outcome
  - Chest-press strength, 50-m walking speed, Stair-climbing speed and power, and a lift-and-lower test
- Safety monitoring
  - Hb, Hct, PSA, serum chemical levels, Prostate exam, LUTS
  - Adverse events: medical dictionary for regulatory activities (MedDRA) system organ class categorization
  - Every 6 months

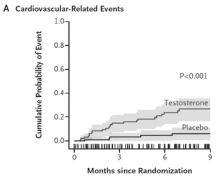
6

TT group are associated with higher rate of adverse cardiovascular events

- Cardiovascular-related events
  - MedDRA-classified cardiac evetns
  - Stenting and bypasss procedures
  - Peripheral edema
  - Elevated blood pressure
  - Arrhythmias
  - ECG changes
  - Stroke and syncope
- Artherosclerosis-related events
  - MI, sudden death, angioplasty, CABG and stroke
- Discontinued early in Dec-2009

7

TT is associated with higher cardiovascular events



Men with higher testosterone levels had higher risk of CV events compared with all other subjects (HR,2.4; P=0.05)

8

Research

Original Investigation

Association of Testosterone Therapy With Mortality, Myocardial Infarction, and Stroke in Men With Low Testosterone Levels

- VA clinical assessment reporting and tracking (CART) program
- 76 VA cardiac catheterization laboratories
  - Data entry by clinicians during clinical workflow
  - VA electronic medical record system

1. Vigen, R., et al. JAMA, 2013. **310**(17): p. 1829-36.

Methods

9

- Covariates
  - Patient characteristics
  - Coronary artery disease
- Primary exposure variable
  - Filling prescription for testosterone gel, patch, or injection
  - Assumption: continued treatment until outcome event occurred or end of fallow-up
- Outcome variable:
  - Time to All-cause mortality
  - Time to Hospitalization for MI or ischemic stroke

Statistical methods

10

- Stabilized inverse probability of treatment weighting
  - Variables
    - demographic characteristics, comorbidities, procedures
- Cox proportional hazards models
  - Association between TT and death, MI, or stroke
  - Adjust for the presence of CAD
- Compare baseline characteristics of TT group and no TT group
  - T test for continuous variables
  - Fisher exact test for dichotomous variables
- Kaplan-Meier survival curves with TT as time-varying covariate

Results

11

- Cohort of 8709 veterans with a total testosterone level <300ng/dL who underwent coronary angiography
  - 20%: prior hx of MI,
  - 50%: diabetes
  - >80%: CAD
- TT vs. non-TT groups
  - 1223 (14%) initiated TT after 531 days following angiography
  - Younger, lower rates of comorbidities

Figure 1. Study Cohort

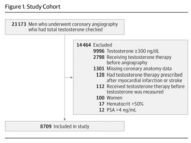


Table 1. Characteristics of Patients at Study Entry Who Did and Did Not Receive Testosterone Therapy

12

	Unweighted Covariates at Study Entry, No. (%) of Patients		
	No Testosterone Therapy (n = 7486)	Testosterone Therapy (n = 1223)	*P* Value
Age, mean (SD), y	63.8 (9.0)	60.6 (7.6)	<.001
Total testosterone, mean (SD), ng/dL	206.5 (73.8)	175.5 (62.3)	<.001
Coronary arteries			
Normal	900 (12.3)	197 (16.1)	<.001
Nonobstructed	2089 (27.9)	356 (29.1)	.64
Obstructed	4497 (60.1)	670 (54.8)	.001
Hypertension	6952 (92.9)	1101 (90.0)	.001
Hyperlipidemia	6611 (88.3)	1051 (85.9)	.02
Diabetes	4171 (55.7)	650 (53.2)	.09
Obesity	4033 (53.9)	703 (57.5)	.02
Depression	2641 (35.3)	448 (36.6)	.37
Prior PCI	2181 (29.1)	335 (27.4)	.22
Obstructive sleep apnea	1980 (26.4)	341 (27.9)	.30
Congestive heart failure	1826 (24.4)	222 (18.2)	<.001
Prior myocardial infarction	1816 (24.3)	248 (20.3)	.002
Chronic obstructive pulmonary disease	1673 (21.7)	228 (18.6)	.02
Peripheral vascular disease	1461 (19.5)	201 (16.4)	.01
Cerebrovascular disease	1221 (16.3)	136 (11.1)	<.001

Table 2. *P* Values for Stabilized Weighting of Covariate Balance at 180, 365, and 540 Days

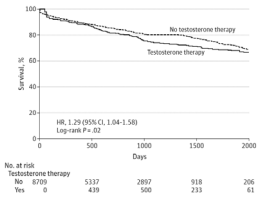
13

	P Values for Weighted Comorbidities Between Testosterone vs No Testosterone Therapy		
	180 d	365 d	540 d
Coronary arteries			
Normal	.64	.82	.45
Nonobstructed	.57	.78	.76
Obstructed	.40	.68	.80
Prior myocardial infarction	.62	.73	.38
Congestive heart failure	.53	.99	.40
Diabetes	.59	.36	.30
Renal failure	.86	.73	.14
Depression	.82	.52	.97
Prior PCI	.69	.96	.79
Hyperlipidemia	.41	.68	.98
Peripheral vascular disease	.85	.42	.55
Chronic obstructive pulmonary disease	.81	.50	.34
Obesity	.26	.25	.12
Hypertension	.98	.61	.63
Cerebrovascular disease	.79	.02	.004
Obstructive sleep apnea	.71	.92	.93

Testosterone use was associated with increased risk of death, MI, or stroke

14

Figure 2. Kaplan-Meier Survival Curves With Testosterone Therapy Evaluated as a Time-Varying Covariate



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15

Increased Risk of Non-Fatal Myocardial Infarction Following Testosterone Therapy Prescription in Men

- The Truven Health MarketScan Commercial Claims and Encounters Database
- Cohort formation
  - database from men with a minimum of 22 months of continuous enrollment for analyses with post-prescription follow-up intervals of 90 days, and 25 months for analyses with post prescription follow-up intervals of 91 to 180 days.
  - first prescription for any of several TT prescriptions not containing estrogen (N = 55,593)
  - first prescription for phosphodiesterase type 5 inhibitors (PDE5I; sildenafil or tadalafil, N=167,279)

1. Rinkle, W.D., et al PLoS One, 2014. **9** (1): p. e85805.

Methods

16

- Covariates
  - Age at initial prescription
  - Diagnostic covariates: Associated with MI
  - Prescription covariates
- Outcome
  - diagnosis of acute MI (ICD-9: 410)
  - 90 days after filling of prescription
  - Post prescription MI incidence/pre-prescription MI incidence, i.e. post/pre rate ratio=RR
  - follow up fill a. MI b. refill 1st prescription c. 90 days following initial prescription
  - Ratio of rate ratios (RRR)=RR of TT group/RR of PDE5I group

Testosterone treatment increased MI rates

17

Table 1. Rates of myocardial infarction per 1,000 persons per year (PY) in men under age 65 years and those age 65 years and older, in pre- and post-prescription intervals for an initial prescription for testosterone therapy rate ratios (RR) and 95% confidence intervals (CI).

	All Ages	Age <65 Years	Age ≥65 Years
Patients (N)	55,593	48,539	7,054
Pre-prescription			
Cases	193	156	37
Rate per 1,000 PY (95%CI)	3.48 (3.02, 4.01)	3.22 (2.75, 3.77)	5.27 (3.81, 7.27)
Post-prescription			
Cases	65	45	20
Rate per 1,000 PY (95%CI)	4.75 (3.72, 6.05)	3.76 (2.81, 5.04)	11.52 (7.43, 17.86)
Rate Ratio (post/pre) (95%CI)	1.36 (1.03, 1.81)	1.17 (0.84, 1.63)	2.19 (1.27, 3.77)

The rate ratio increase of MI after TT initial prescription is higher than after PDE5I

18

	Heart Disease History		No Heart Disease History	
	TT Prescription	PDE5I	TT Prescription	PDE5I
Age <65 Years				
Patients (N)	4,006	10,681[1]	44,533	130,831[1]
Pre-prescription				
Cases	21	65	155	491
Rate per 1,000 PY (95%CI)	5.26 (3.43, 8.06)	5.26 (3.43, 8.06)	3.04 (2.57, 3.60)	3.04 (2.57, 3.60)
Post-prescription				
Cases	15	20	30	99
Rate per 1,000 PY (95%CI)	15.22 (9.18, 25.25)	7.34 (6.89, 7.82)	2.73 (1.91, 3.91)	3.01 (2.95, 3.08)
Rate Ratio (post/pre) (95%CI)	2.9 (1.40, 5.62)	1.4 (0.91, 2.14)	0.90 (0.61, 1.34)	0.99 (0.84, 1.17)
EBF[2] (95%CI)	2.07 (1.05, 4.11)		0.91 (0.68, 1.37)	
Age ≥65 Years				
Patients (N)	2,047	5,492[1]	5,057	20,275[1]
Pre-prescription				
Cases	15	35	22	104
Rate per 1,000 PY (95%CI)	7.36 (4.44, 12.22)	7.36 (4.44, 12.22)	4.41 (2.90, 6.7)	4.41 (2.90, 6.7)
Post-prescription				
Cases	11	13	12	20
Rate per 1,000 PY (95%CI)	15.91 (7.96, 31.81)	8.35 (7.36, 9.48)	9.74 (5.51, 17.14)	4.84 (3.69, 4.42)
Rate Ratio (post/pre) (95%CI)	2.16 (0.92, 5.10)	1.13 (0.68, 1.88)	2.21 (1.04, 4.69)	0.92 (0.60, 1.39)
EBF[2] (95%CI)	1.90 (0.66, 5.56)		2.41 (1.12, 5.17)	

BMC Medicine

RESEARCH ARTICLE Open Access

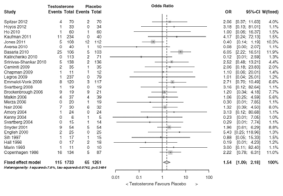
19

Testosterone therapy and cardiovascular events among men: a systematic review and meta-analysis of placebo-controlled randomized trials

- Data sources
  - Pubmed search through Dec, 2012
    - estosterone or androgen?and rial?and andom*;
  - Men in English
- Study selection
  - Randomized placebo-controlled trials of testosterone = 12 wks
  - Cardiovascular-related events by study arm
- Outcome
  - Composite cardiovascular related events
- Data synthesis and analysis
  - Pooled odds ratio obtained by metabin?function of the eta?package in R2.14.1

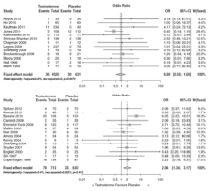
Testosterone therapy increase the risk of cardiovascular-related events

20



The effect of testosterone on rate of cardiovascular events was influenced by funding source

21



Conclusions

22

- Testosterone gel increase the risk of CV adverse events in community dwelling men 65 y/o or older with limitations in mobility
- Testosterone therapy (TT) use was associated with increased risk of mortality, MI or ischemic stroke in veterans with significant medical comorbidities.
- In men aged 65 y/o or older, TT increased rate ratio of MI up to 2.19; in men younger than 65 y/o with heart disease history, TT increased the rate ratio of MI up to 2.90
- In an updated systemic meta analysis of RCT trials, TT is associated with increased cardiovascular event with pooled odds ratio=1.54

Why contradictory results

23

- Differences between the effects of endogenous hormones and those of pharmacologic hormonal therapy[1]
- Differences in the duration of exposure to testosterone[1]
- Possible mechanism
  - Testosterone causes salt and water retension
  - Increase in testosterone and estradiol may promote inflammation, coagulation and plt aggregation
  - Increase plt thromboxane A2 receptor density and plt aggregation.
  - DHT, increases smooth muscle proliferation and expression of vascular cell adhesion molecule 1-> enhance monocyte activation in the endothelium
  - Worsen obstructive sleep apnea

1. Basaria, S., et al., N Engl J Med, 2010. **363**(2): p. 109-22.

Clinical Debate II

Debate I (Cons)：

Issue 4：Is there an Increased CV Risk after TRT ?

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高雄醫學大學 醫學院 醫學系 泌尿學科
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Testosterone (T) in healthy men reaches its highest levels at approximately age 30, after which it starts to gradually decline at a rate of 1% to 2% annually. In past 2 decades, a significant increase in the number of prescriptions for TRT was witnessed (nearly 500% increase) due to increased aging population, increased media attention to TRT, and the development and consequent wide marketing of new testosterone formulations. However, the safty of TRT especially on CV risk was still under debated and greatly concerned.

Why we think TRT will not increase CV risk in hypogonadal men? There are seveal reasons supported our viewpoint.

1. Low T levels are associated with several risk factors of atherosclerosis including T2DM, dyslipidemia, obesity, and biomarkers of inflammation(1,2).
2. T levels are inversely related to carotid intima-media thickness and severity of coronary artery disease(1).
3. Men with low T levels are prone to have higher risk of all-cause mortality and CVD mortality(3).
4. Previous meta-analyses didn't show TRT increase adversed CV outcomes(1,4,5).
5. TRT reduces inflammation and ameliorates metabolic syndrome components in men with low T levels(1,6,7).
6. TRT might have beneficial effects on cardiac ischemia, angina and chronic heart failure(1,8).
7. Some studies found TRT improved survival in men with low T levels(9,10).

Although some of recent studies have found TRT may increase CV risk(11-13), their study designs and analyical methods had been criticized by many experts and professional societies(14-17). Their results might not be extended to general population. However, previous meta-analyses found TRT would result in a significant increase of hemoglobin levels as well as hematocrit levels(4). It should be kept in mind in clinical practice especially performing TRT in subjects with older age or higher CV risk(18). Further large longitudinal, placebo-controlled, randomized studies are still needed to clarify the real effects of TRT on cardiovascular health.

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男性不孕症研討會–食品安全與男性生殖

反式脂肪對男性生殖影響

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The Impact of Trans Fatty Acids in Male Reproduction

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Purpose: In the past decades, a significant decline in sperm concentration and total sperm count has been reported among healthy men. The cause of this phenomenon remains a perplexity. However, there are accumulating evidence thatdietary habit may have an impact on semen quality. Most commercially prepared food contain trans fatty acids (TFAs) because of their low cost and long shelf life. Our report is associated with impact of trans fatty acids in male reproduction from comprehensive literature review.

Materials and Methods: This report is based on a reviewof most recent documents about trans fatty acids in male reproduction. We analyzed the collected information about rationale formations, animal models and clinical impact of trans fatty acids in male reproduction. We also compared the power of clinical evidence in different publication based on their study design and statistic data.

Results: There are only a few literature concerning about TFAs in male infertility. Rodent models suggest that trans fat intake can cause impaired spermatogenesis and testicular damage. In human, trans fatty acid intake is inversely related to total sperm count in young healthy man through dietary assessment. Moreover, the high intake of trans-fats was positively related to the odds of having asthenozoospermia.

Conclusions: Intake of trans fatty acid not only is a known hazard to cardiovascular system but also comprehend negative effects in male reproduction. Our comprehensive review of trans fatty acids in male reproduction might offer useful recommendations in lifestyle modification in infertility counseling.

男性不孕症研討會–食品安全與男性生殖

棉籽油〈棉酚〉與男性生殖
Cottonseed Oil (Gossypol) and Male Fertility

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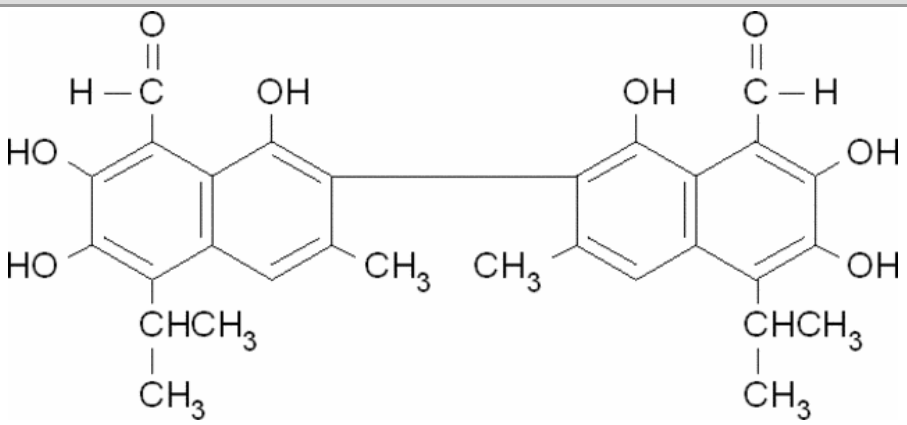
Gossypol（棉酚）is a yellow pigment derived from the seed, root and stem of cotton plant and its botanical name of the cotton plant, *Gossypium*（棉花屬）. It is a natural defensive agent to cause infertility in insects. Gossypol also causes spermatogenesis arrest in human and other mammals. Some large studies of its antifertility effect in human are performed in China, Africa, and Brazil showed well tolerance with no major side effects. The mechanism of gossypol is acting on germinal epithelium of seminiferous tubule and causing atrophy in seminiferous tubule with only single layer of Sertoli cells and spermatogonia left in the tubules. The decreases happened in sperm count, motility after taking gossypol and finally come to azoospermia. In the hypothalamic–pituitary–gonadal axis (HPG axis), some studies showed degeneration in pituitary with FSH / LH decrease and some showed no differences. Hypokalemia was reported in early studies and it was not confirmed in later large studies. The major concern of antifertility effect of gossypol is the irreversibility in infertility found in about 20% of people. In the role of contraceptives, gossypol should be used only in men who have accepted the possible result of permanent infertility.

Gossypol



重金屬鋁與男性生殖

魏子鈞/黃志賢主任
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鋁是地表上含量最多的金屬，僅次於氧、矽，為含量第三多的元素，大都以化合物的形態存在。然而鋁對於人體並非必要的微量元素，進入體內的鋁幾乎都會隨著糞便排出體外，只有少部分會留存在內臟組織及腦部中。過去，鋁於人體的研究，最初是發現神經系統的影響，包括記憶力和智力退化如 Alzheimer's disease，另外也造成心肺及胃腸道的提早老化，引起體虛無力、胃液分泌減少和消化不良，或是影響鐵鈣磷等的吸收導致貧血和骨質疏鬆。因此，鋁於一九八九年被世界衛生組織正式列入食品污染物名單。

然而，最近的研究指出：鋁對於造精功能亦有減損。在一九八四年，鋁最初被發現存在於精液當中[1]，而後一九九〇年在狗身上發現食用鋁會降低睪丸重量[2]，以及造成老鼠的曲細精管萎縮薄化甚至壞死[3]，當然也包括精液品質的整體下降[4-7]。然而得到的結論莫衷一是，Llobet et al.發現只有 count 下降但 motility 及 morphology 沒有顯著差異[3]；Sharma et al.則是 count 和 motility 下降[5]；Yousel et al.指出 count、motility 和 morphology 三者皆降[6]；D'Souza et al.最近二〇一四年所發表則是 count 及 morphology 下降[7]；此外，也有三項 parameter 皆無明顯差異者[8]。

上述大多數關於鋁對造精影響的研究都來自動物實驗，在人身早期只有一九九八年的兩篇：其一為芬蘭研究發現 count 沒有減少但 motility 及 morphology 下降[9]，另一為美國德州研究只有 motility 下降[10]。最近一篇二〇一四年的法國研究首次針對精液的鋁濃度進行檢測(以往都是血中或睪丸中[11])，發現僅和 count 成顯著負相關[12]，同時矯正了抽菸和精液鋁濃度的關聯，並用免疫螢光點出鋁在精蟲上附著沉積的部位，特別是在 spermatozoa 上。

至於鋁之所以導致造精減損的機轉究竟為何？目前仍不得而知。可能的理論有 reactive oxygen species[13]和 hormonal disruption[6, 14]這兩方面(包括 testosterone 及 androgen receptor 的下降)，然而證據都仍待進一步確認。

關於國人該如何減少身體接觸或吸入重金屬鋁，目前已知的來源有五：[15-19]

1. 食物：油條、燒餅摻有明礬，正是含鋁的食物添加劑。蒸製的麵食、糕點(如饅頭、花捲、發糕)中的發酵粉，也含有鋁的食物添加劑。
2. 飲水：茶葉有鋁成分存在，嗜飲濃茶者尤多。用鋁製容器、炊具來燒水或烹食前，宜先多煮沸幾次，倒掉水，讓鋁釋出，以減少鋁的含量。並忌用鋁製品烹調或盛裝酸性、鹼性或過鹹的食物，以免起化學作用，增加鋁的釋出量。
3. 空氣：抽菸會增加鋁的吸入，工業區的空氣物染亦然。
4. 化妝品：止汗劑或卸妝劑可能含有鋁成分。
5. 藥物：制酸劑、aspirin 緩衝劑、疫苗、或過敏原檢測劑都有可能含鋁。

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男性不孕症研討會–食品安全與男性生殖

丙烯醯胺與男性生殖

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台大新竹分院

丙烯醯胺(acrylamide)能聚合成聚丙烯醯胺(polyacrylamide)，主要用於廢水處理，化妝品、造紙和紡織工業中。該物質為可能的致癌物，並對神經系統和生殖系統具有毒性。在 2002 年瑞典食品藥物管理局宣稱，富含碳水化合物的食物經高溫加熱處理後，可發現相當高的丙烯醯胺含量，從此後引起各國重視，且紛紛投入研究。近年來各國對於其國內各類食品中丙烯醯胺的含量，每年均做相當徹底的調查。而歐盟根據科學證據，擬出多種減少食品中丙烯醯胺含量的方法，讓消費者能安心食用低丙烯醯胺含量的產品。

在早期動物實驗中發現，低劑量的丙烯醯胺會減少每窩幼體的數量，較高劑量則會影響精子的形態和活力，甚至因神經毒性而減少交配的次數。隨著暴露劑量的增加，血清中 testosterone 的濃度和 Leydig cell 的生存會下降。在組織病理學中，在暴露於丙烯醯胺老鼠的曲精小管(seminiferous tubules)內可發現多核巨細胞(multinucleatd giant cell)和退化的生殖細胞(degenerated germ cell)。在分子生物學的層面，在暴露於丙烯醯胺的群組中發現某些與睪丸功能、細胞凋亡、細胞氧化還原、細胞循環相關的基因被向上或向下調節。有學者因此提出丙烯醯胺對男性生殖系統的毒性來自於 Leydig cell 的死亡和基因表現的擾亂，以致產生有缺陷的精子和上述的組織病理學的發現。

在較近期的研究中則發現，暴露於丙烯醯胺群組的精子，其 DNA 的完整性(DNA integrity)、染色質的凝聚(chromatin condensation)、細胞膜的完整性(membrane integrity)均較對照組差。

男性不孕症研討會–食品安全與男性生殖

Plasticizers and Male Infertility

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Male infertility, including decreased semen quality, is an important issue in the world. Multiple risk factors including age, genetic, lifestyle, obesity, environmental endocrine disruptors, and psychosocial stress might cause male infertility. Endocrine disruptor, phthalate esters (PAEs) are commonly used as plasticizers in consumer products and widely spread around our environment. Animal studies indicated that phthalates exposures caused several detrimental reproductive defects via anti-androgenic activity. However, it still debated with the adverse effects on human male reproduction. 259 infertile menand 39 fertile men were recruited. After signed informed consent, urine and semen samples were collected and questionnaire interview was conducted. Levels of phthalate monoesters in urine and semen samples were analyzed with HPLC-MS/MS. Semen quality, reproductive hormones and insulin-like 3 (INSL3)of all subjects were also evaluated. After adjustment for age, BMI, cigarettes, and season of blood drawing, urinary MMP was inversely associated with total testosterone (P=0.035). Urinary MEP was negatively associated with the TT: LH ratio(P=0.021) and positively correlated with estradiol (P=0.007). Urinary MEP, MiBP, MBzP, MEHHP, MECPP and ΣDEHP were negatively associated with the Inhibin B:FSH ratio (P<0.05). Urinary MEHP and MEHP% were also negatively correlated with INSL3 (P<0.05). After adjustment for age, BMI, cigarettes, and abstinence time, urinary MMP, MEP, MiBP and MECPP were positively associated with liquefaction time (P<0.05). Urinary MiBP and MECPP were inversely associated with sperm motility (P<0.05). In addition, seminal MMP, MEHP and MEHHP were negatively associated with INSL3 (P<0.05). Seminal MEHP and ΣDEHP were inversely associated with sperm concentration (P<0.05). Seminal MEP, MEHHP and ΣDEHP were negatively associated with total motility (P<0.05). The infertile men with abnormal semen quality had higher estrogen receptor binding effect and androgen receptor antagonistic effect. In conclusion, we demonstrated that exposures to several phthalate esters (especially DMP, DEP, DiBP, BBzP and DEHP) might simultaneously act as agonists and/or antagonists viaestrogen and androgen receptors and interfere with hormone imbalance in Leydig cell and spermatogenesis in Sertoli cell of testis in infertile men.

Key words: Phthalate exposures, male infertility, semen quality, reproductive hormone, INSL3

Special Lectures 1

Peyronie's Disease and Penile Curvature

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Peyronie's disease (PD) is most referred to as a progressive fibrotic wound-healing disorder, characterized by formation of collagen plaques on the tunica albuginea of the penis. A general explanation of this disorder, which has gained acceptance, is that PD is a disorder in which genetically susceptible individuals experience a localized response to endogenous factors such as tumor growth factor-β, which are released in response to microtrauma.

The course of PD includes an early inflammatory phase that may last up to 18 months and a subsequent stable phase. In the early phase, patients may experience penile pain as the tunical plaque develops. During the stable phase, the plaque becomes more organized, penile curvature stabilizes, and the pain usually subsides. It is both a physically and psychologically devastating disorder that causes penile deformity, curvature, hinging, narrowing, shortening and painful erections, as well as often occurs in conjunction with erectile dysfunction. The perceived loss of length and girth is more disturbing than the curvature itself, all of which can physically limit intercourse and impose a severe psychological burden.

Based on the limited currently available clinical data, choice of treatment for PD is problematic. Currently, there are several investigational minimally invasive and non-surgical treatment options for PD with variable success. Even though no single, standardized, surgical treatment for this disorder has prevailed, it remains the standard of care for patients with stable disease and disabling deformity or drug-resistant erectile dysfunction. Each of the different surgical procedures includes tunical shortening, tunical lengthening (plaque incisions or partial excision and grafting), and penile prostheses, poses its own advantages and disadvantages in terms of potential complications and postoperative satisfaction. Surgical outcomes of the most commonly used procedures are not substantially different; the appropriateness of each treatment option may often depend on disease and patient characteristics. Congenital penile curvature can only be treated surgically, using the same principles as in PD.

Despite a myriad of treatment options, PD remains a considerable therapeutic dilemma. Surgical algorithms have been published through the selection of surgical procedures in the absence of conclusive, long-term outcome data. Accumulating data on outcomes may serve to further guide practice and refine selection of the surgical approach.

Special Lectures 2

Priapism

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Priapism is a prolonged erection that persists beyond or is unrelated to sexual stimulation. It is often painful penile erection lasting more than 4 h unrelated to sexual stimulation. It is more common in patients with sickle cell disease. There are three major types of priapism: ischemic, nonischemic, and stuttering. It can be classified into ischaemic (low flow), arterial (high flow), or stuttering (recurrent or intermittent).

Ischemic priapism is usually idiopathic and the most common form. Arterial priapism usually occurs after blunt perineal trauma. History is the mainstay of diagnosis and helps determine the pathogenesis. Laboratory testing is used to support clinical findings. Ischemic priapism is an emergency condition. Intervention should start within 4–6 h, including decompression of the corpora cavernosa by aspiration and intracavernous injection of sympathomimetic drugs. Surgical treatment is recommended for failed conservative management, although the best procedure is unclear. Immediate implantation of a prosthesis should be considered for long-lasting priapism. Arterial priapism is not an emergency. Selective embolization is the suggested treatment modality and has high success rates. Stuttering priapism is poorly understood and the main therapeutic goal is the prevention of future episodes. Stuttering ischemic priapism challenges the clinician to develop a management strategy to prevent future episodes of priapism. Daily treatment with low dose Phosphodiesterase Type 5 Inhibitors is a promising but investigational means of preventing stuttering priapism.

Special Lectures 3

Delay Ejaculation

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奇美醫學中心 泌尿外科

Delayed Ejaculation

奇美醫學中心
泌尿外科 劉建良
2015-03

Patient profile

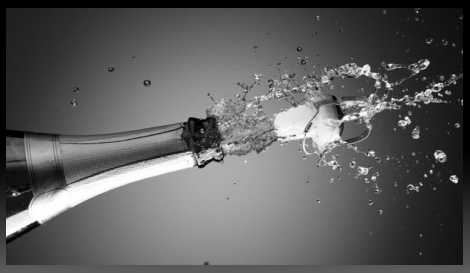
- Name: 孫XX
- Age: 34 y/o
- Gender: male

Brief

- CC: Difficult to ejaculation for 2 months
- Erection, intercourse, masturbation: normal
- Past history: DM(-), HTN(-), allergy(-), smoking(-), drug(-)
- PE: normal external genital, normal penis
- Lab: normal

Cho. LDL	115	mg/dL	66 - 130
Cho. HDL	51	mg/dL	> 40
TG	72	mg/dL	< 150
HbA1c	5.4	%	4.2 - 6.4
Testosterone	4.68	ng/mL	1.66 - 8.11

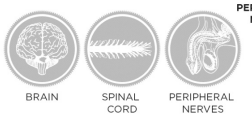
Next step ??

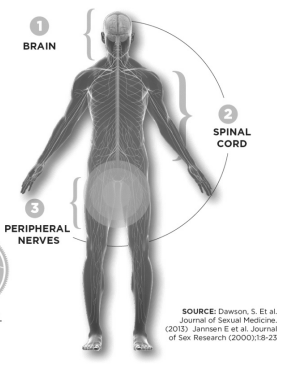


EJACULATION

Ejaculation is the outcome of sexual arousal and, **normally, occurs simultaneously with orgasm.**

It is induced by nerve stimulation, resulting in the expulsion of semen from the outer urethral orifice.





SOURCE: Dawson, S. Et al. Journal of Sexual Medicine. (2013) Janssen E et al. Journal of Sex Research (2000);18-23

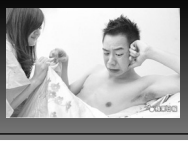
Mechanism of ejaculation

- Orgasm: Centrally controlled
  - Sensory experience
- Emission: Sympathetic T10-L2
  - Contraction of seminal vesicles and prostate
  - Expulsion of sperm/seminal fluid into posterior urethra
- Ejection: Sympathetic S2-S4
  - Bladder neck closure
  - Relaxation of external sphincter
  - Rhythmic contraction of bulbucavernosus/pelvic floor muscles

Ejaculation

Ejaculation disorders

- Timing (premature or delayed)
- Direction (antegrade or retrograde)
- Emission (aspermia)
- Orgasm (lack of it)
- Pain
- Hematospermia



Delayed ejaculation (DE)

- Varying delays in the latency to ejaculation, or the complete inability to ejaculate
- A man inability for or persistent difficulty in achieving orgasm
- Despite typical sexual desire and sexual stimulation

Delayed ejaculation (DE)

- Generally, a man can reach orgasm within a few minutes of active thrusting during sexual intercourse.
- A man with delayed ejaculation either does not have orgasms at all or cannot have an orgasm until after prolonged intercourse which might last for 30–45 minutes or more
  - *Am Fam Physician*. 2010;81:305-312

10

Delayed ejaculation (DE)

- In most cases, the man can climax and ejaculate only during masturbation, but not during sexual intercourse.
- It is the least common of the male sexual dysfunctions (<3%)
  - and can result as a side effect of some medications.
- In one survey, 8% of men reported being unable to achieve orgasm over a 2-month period or longer in the previous year.
  - *Oxford textbook of psychopathology* (pp. 399–430).

11

Clinical presentation

- **Mild**: men who still experience vaginal orgasm, but only under certain conditions
- **Moderate**: cannot ejaculate during intercourse, but can during fellatio (oral sex) or manual stimulation
- **Severe**: can ejaculate only when alone
- **Most severe**: cannot ejaculate at all

12

Cause

- Hypogonadism
- Thyroid disorders
- Pituitary disorders: Cushing disease
- Prostate surgery outcome
- Drug and alcohol
  - *Oxford textbook of psychopathology* (pp. 399–430).

13

Nerve

- Difficulty in achieving orgasm can also result from pelvic surgery
  - trauma to pelvic nerves
- Lack of sensation in the nerves of the glans penis
  - hx of circumcision

- adrologia. 2013 Apr 20. doi: 10.1111/and.12101

14

Medication

- Delayed ejaculation is a possible side effect of certain medication
  - Selective serotonin reuptake inhibitors (SSRIs),
  - Antipsychotics
  - Antihypertensives

- *The British Journal of Psychiatry* **181**: 49–55.

15

Other factors

- Psychological and lifestyle factors have been discussed as potential contributors, including
  - insufficient sleep,
  - distraction due to worry,
  - distraction from the environment,
  - anxiety about pleasing his partner
  - anxiety about relationship problems
    - Mann, Jay (1976). "Retarded ejaculation and treatment". *International Congress of Sexology* (Montreal, Canada).

16

Masturbation

- One proposed cause of delayed ejaculation is adaptation to a certain masturbatory technique
- Traumatic masturbatory syndrome

- Sank, Lawrence (1998). Tramatic masturbatory syndrome. *Journal of Sex & Marital Therapy* **24**: 37–42.

17

Treatment

- Psychotherapy
- Medication
- Sex therapy
- Orthers

18

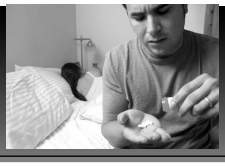
Treatment -- medication

Therapeutic Advances in Urology Review

Ther Adv Urol (2013) 5(5) 254–297
DOI: 10.1177/1756287213497231

A systematic review of the correlates and management of nonpremature ejaculatory dysfunction in heterosexual men

Raouf Seyam



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Trends

- There is an increasing interest in nonpremature ejaculatory dysfunction (non-PE EjD).
- The frontier of sexual medicine has shifted slowly from ED to PE and now to non-PE EjD.
  - *Ther Adv Urol* (2013) 5(5) 254–297

Treatment -- medication

- Several medications that act on the adrenergic or serotoninergic receptors had some effect in the treatment.
- Bupropion, used as an antidepressant and smoking cessation , was shown to decrease orgasmic delay.
- Bupropion therapy for lifelong DE resulted in an increase of men rating control over ejaculation from 0 to 21.1%.

21

Bupropion

- Mean intravaginal ejaculatory latency time (IELT) decreased 0.74-folds after treatment.
- There was a significant improvement in the intercourse satisfaction and the orgasmic domains of IIEF and depression score from baseline
  - Abdel-Hamid and El Saleh, *J Sex Med 8: 1772–1779.* 2011.

22

Bupropion

- In men with non-depression-associated orgasmic delay, bupropion treatment caused a significant improvement on orgasm and sexual satisfaction
  - Modell et al. *J Sex Marital Ther 26: 231–240* 2000

23

Antidepressant

- Fluoxetine-treated subjects had lower orgasmic function scores less than placebo and gepirone-ER
  - Fabre et al. 2012
- After yohimbine treatment of patients with orgasmic dysfunction, 55.2% managed to reach orgasm and were able to ejaculate during either masturbation or sexual intercourse
  - Adeniyi et al. *Asian J Androl 9: 403–407.*2007

24

PDE5i

- Several reports showed that in certain clinical conditions, PDE5i could successfully treat ejaculatory and orgasmic dysfunction.
- In a prospective, placebo-controlled trial, sildenafil significantly improved ejaculation and orgasm in male outpatients with major depression and antidepressant treatment associated sexual dysfunction
  - Nurnberg et al. *JAMA 289: 56–64*.2003

25

Tadalafil

- In patients with ED, a pooled analysis of 17 placebo-controlled 12-week trials, treatment with tadalafil 10 or 20 mg was associated with significant improvement in ejaculatory and orgasmic function.
- In the tadalafil group, 66% of subjects with severe EjD or severe orgasmic dysfunction reported improvement compared with 35–36% in the placebo group
  - Paduch et al. *BJU Int 109: 1060–1067*.2013

26

Tadalafil daily use

- A randomized, double-blind, placebo-controlled study of tadalafil 5 mg once daily for 12 weeks in men with LUTS/BPH, tadalafil treatment significantly improved ejaculation and orgasm compared with placebo or tamsulosin treatment
  - Giuliano et al., *J Sex Med 10: 857–865, 2013*.

27

Treatment -- sex therapy

- Therapy usually involves homework assignments and exercises intended to help a man get used to having orgasms through insertional intercourse, vaginal, anal, or oral, that is through the way he is not accustomed to.
- Commonly the couple is advised to go through 3 stages
  - Dr. David Delvin, NetDoctor.co.uk. Retrieved 2007-10-25.

28

- 1st stage: a man masturbates in the presence of his partner.
  - Sometimes this is not an easy matter as a man might be used to having orgasms alone.
- 2nd stage: the man's hand is replaced with the hand of his partner.
  - Step by step a man learns to ejaculate closer and closer to the desired orifice

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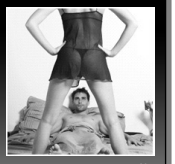
- 3rd stage: insertive (penis into vagina, anus or mouth) as soon as the ejaculation is felt to be imminent.
- Thus a man gradually learns to ejaculate inside the desired orifice



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Treatment -- other

- In some cases hypnosis can help with the problem, especially if a partner does not want to participate in therapy.
  - M. M. Delmonte . Springer Netherlands. Retrieved 2007-10-25.

31

Our patient

- Worried about infertility
- Mental support
- Medication: PDE5i
- Recovery

32

Conclusion

- 性是人一輩子的事
- 性功能障礙－專業醫師諮詢
  - 勃起功能異常
  - 快槍俠
  - 金槍不倒
- 祝大家性生活美滿和諧

33

Thanks for your attention!!

34

Special Lectures 4

Female Sexual Dysfunction

Te-Fu Tsai
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Abstract

Sexual health is defined by the World Health Organization as the integration of somatic, emotional, intellectual, and social aspects in ways that are positively enriching and that will enhance personality, communication, and love. The female sexual response is multifaceted involving neurovascular, endocrine and psychosocial factors. Optimal female sexual health comprises physical, mental, and emotional aspects, and these are the context in which a woman experiences desire, arousal, and orgasm. Sexual dysfunction in females is a complex and highly prevalent disease, and commonly associated with quality of life. Several factors influence female sexual function, including physiological and psychosocial factors. I will discuss models of female sexual response, define and categorize female sexual dysfunction, and identifie therapeutic modalities for female patients who have sexual dysfunction.

感染議題

STD and Prostate

陳　煜醫師
長庚紀念醫院

STD and Prostate

陳煜
長庚紀念醫院

- Prostatitis (prostate infection) is an infection or inflammation of the prostate gland that presents as several syndromes with varying clinical features.
- The term prostatitis is defined as microscopic inflammation of the tissue of the prostate gland and is a diagnosis that spans a broad range of clinical conditions.

Krieger JN, Nyberg L Jr, Nickel JC. NIH consensus definition and classification of prostatitis. JAMA. 1999;282:236-7.

2

- Prostatitis is one of the most common diseases seen in urology practices in the United States, accounting for nearly 2 million outpatient visits per year.
- The diagnosis is made in approximately 25% of male patients presenting with genitourinary symptoms.
- Autopsy studies have revealed a histologic prevalence of prostatitis of 64-86%.

Collins MM et al: How common is prostatitis? A national survey of physician visits. *J Urol.* 1998;159(4):1224-8.

Nickel JC et al: Prevalence of prostatitis-like symptoms in a population based study using the National Institutes of Health chronic prostatitis symptom index. *J Urol.* Mar 2001;165(3):842-5.

Schaeffer AJ. Clinical practice. Chronic prostatitis and the chronic pelvic pain syndrome. *N Engl J Med.* 2006;355(16):1690-8.

3

The National Institutes of Health (NIH) has recognized and defined a classification system for prostatitis in 1999:

- I -Acute bacterial prostatitis
- II -Chronic bacterial prostatitis
- III - Chronic prostatitis and chronic pelvic pain syndrome (CPPS; further classified as inflammatory or noninflammatory)
- IV - Asymptomatic inflammatory prostatitis

4

- In bacterial prostatitis, sexual transmission of bacteria is common, but hematogenous, lymphatic, and contiguous spread of infection from surrounding organs must also be considered.
- A history of sexually transmitted diseases is associated with an increased risk for prostatitis symptoms.

Krieger JN, Nyberg L Jr, Nickel JC. NIH consensus definition and classification of prostatitis. JAMA. 1999;282:236-7.

5

- Viral and granulomatous prostatitis may be associated with HIV infection and is another cause of culture-negative disease.
- A common viral pathogen of prostatitis in HIV-infected patients:
  - cytomegalovirus (CMV)
  - Mycobacteria, such as Mycobacterium tuberculosis
  - fungi, such as Candida

Mastroianni A, et al: Acute cytomegalovirus prostatitis in AIDS. Genitourin Med. 1996;72(6):447-8
Gebo KA. Prostatic tuberculosis in an HIV infected male. Sex Transm Infect. 2002;78(2):147-8

6

- Acute bacterial prostatitis may be caused by ascending infection through the urethra, refluxing urine into prostate ducts, or direct extension or lymphatic spread from the rectum.
- Approximately 80% of the pathogens are gram-negative organisms:
  - Escherichia coli
  - Enterobacter
  - Serratia
  - PseudomonasFeneley
  - Enterococcus
  - Proteus species

Consider Neisseria gonorrhoeae and Chlamydia trachomatis infection in any male younger than 35 years presenting with urinary tract symptoms.

Feneley M et al: Clinico-pathological findings simulating prostatic malignancy following sclerotherapy: a diagnostic pitfall. *Br J Urol.* 1996;77(1):157-8

7

Chronic bacterial prostatitis may be due to the following:

- E coli is responsible for 75-80% of chronic bacterial prostatitis cases. (Enterococci and gram-negative aerobes such as Pseudomonas are usually isolated in the remainder of cases)
- C trachomatis,Ureaplasma species, Trichomonas vaginalis
- Uncommon organisms, such as:
  - M tuberculosis
  - Coccidioides
  - Histoplasma
  - Candida species
  - Tuberculous prostatitis may be found in patients with renal tuberculosis
- Human immunodeficiency virus
- Cytomegalovirus
- Inflammatory conditions (eg, sarcoidosis)

Murphy AB et al: Chronic prostatitis: management strategies. *Drugs.* 2009;69(1):71-84

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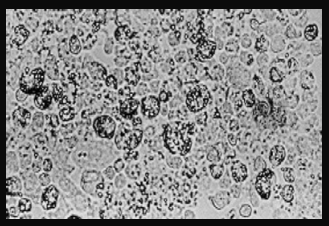
Bacterial prostatitis. Expressed prostatic fluid contains more than 10 white blood cells per high-power field, indicating prostatitis.



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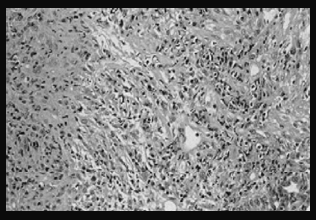
A nonspecific mixed inflammatory infiltrate that consists of lymphocytes, plasma cells, and histiocytes is typical in chronic bacterial prostatitis.



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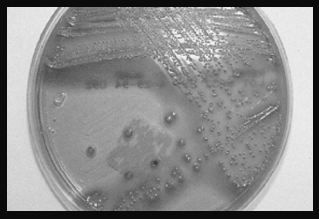
Urine culture with greater than 100,000 colony-forming units (CFU) of Escherichia coli, the most common pathogen in acute and chronic prostatitis. Chronic bacterial prostatitis must be confirmed and diagnosed using a urine culture.



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Prokaryotic DNA sequences in patients with chronic idiopathic prostatitis

- The etiology of prostatitis is unknown for more than 90% of patients
- Culture methods were used to select 135 men with chronic prostatitis refractory to multiple previous courses of antimicrobial therapy
- Specific PCR assays detected Mycoplasma genitalium, Chlamydia trachomatis, or Trichomonas vaginalis in 10 patients (8%).

J. Clin. Microbiol. 1996, 34: 3120

12

Prokaryotic DNA sequences in patients with chronic idiopathic prostatitis

TABLE 1. Molecular diagnosis of microorganisms in 135 men attending a chronic prostatitis clinic[a]

PCR assay	No. of subjects positive/no. of subjects assayed	Proportion positive (%)
Specific organism		
M. genitalium	5/135[b]	4
C. trachomatis	4/135[b]	3
T. vaginalis	2/135	2
U. urealyticum	0/135	0
Mycoplasma probe[c]		
Cytomegalovirus	0/135	0
Herpes simplex virus types 1 and 2	0/135	0
PGK[d]	135/135	100
Broad spectrum		
tetM-tetO-tetS[e]	30/120	25
16S rRNA[f]	103/134	77

J. Clin. Microbiol. 1996, 34: 3120

13

Causes and Differential diagnosis of Hematospermia

(Andrologia, 1981: 474-478)

Rare cases of prostatitis caused by invasion of Trichomonas vaginalis with Candida albicans

(Kurnatowska: Journal Article, Case Reports, English Abstract (lang: pol)

Asymptomatic bacteriospermia: Cause of infertility in men

(Urology, 1976(8): 563-566)

14

Trichomonas vaginalis in the prostate gland

- Using established immunoperoxidase procedures, we have positively identified trichomonads in the prostatic urethra, glandular lumina, submucosa, and stroma. Foci of nonspecific acute and chronic inflammation, as well as intraepithelial vacuolization, were associated with the infection. The finding of trichomonads within and beneath glandular epithelium necessitates reevaluation of the traditional view of T vaginalis as a strictly surface-dwelling organism.

Archives of Pathology & Laboratory Medicine [1986, 110(5):430-432]

15

Trichomonas vaginalis associated with nongonococcal urethritis and prostatitis

- Trichomonas vaginalis was recovered from three (1.7%) of 179 men with nongonococcal urethritis.
- Prostatitis was found in 11 (8%) of 138 of these men who had prostatic examinations;
- T. vaginalis was recovered from two of the 11.
- The typical clinical presentation was persistent urethritis and/or prostatitis due to an antibiotic-resistant agent.

Kuberski T: Sexually Transmitted Diseases 1980, 7(3):135-136

16

Meta-Analysis of Measures of Sexual Activity and Prostate Cancer

Dennis, Leslie K.1 and; Dawson, Deborah V.2
Epidemiology: 2002 - Volume 13 - Issue 1 - pp 72-79

- The data suggest an elevated relative risk (RR) of prostate cancer among men with a history of sexually transmitted infections.
- This was observed with both random- and fixed-effects models (RR = 1.4; 95% CI = 1.2–1.7; N = 17 studies; heterogeneity P = 0.14), especially for syphilis (RR = 2.3; 95% CI = 1.3–3.9; N = 6; heterogeneity P = 0.47).
- Risk of prostate cancer is also associated with increasing frequency of sexual activity (RR = 1.2 for an increase of three times per week; 95% CI = 1.1–1.3; N = 12). However, these studies are heterogeneous (P < 0.001).
- Increasing number of sexual partners is also associated with prostate cancer (RR = 1.2 for an increase of 20 partners; 95% CI = 1.1–1.3; N = 16; heterogeneity P = 0.11).
- The data do not support associations with multiple marriages, age at first intercourse, or age at first marriage.
- These results indicate an association between prostate cancer and sexually transmitted infections, suggesting that infections may represent one mechanism through which prostate cancer develops.

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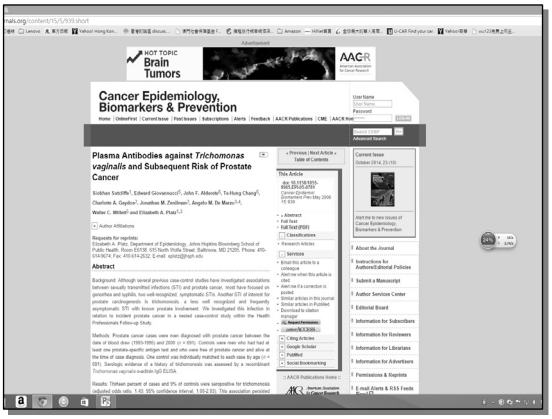

Association of TV and Prostate Cancer

- a case–control study included 673 case with prostate cancer and 673 matched control subjects who had available plasma samples
- antibodies against *T vaginalis* with an enzyme-linked immunosorbent assay
- a seropositive status was statistically significantly increased risks of extraprostatic prostate cancer (OR = 2.17, 95% CI = 1.08 to 4.37) and of cancer that would ultimately progress to bony metastases or prostate cancer–specific death (OR = 2.69, 95% CI = 1.37 to 5.28).

STARK JR et al. Prospective study of Trichomonas vaginalis infection and prostate cancer incidence and mortality: Physicians' Health Study. J Natl Cancer Inst. 2009 Oct 21;101(20):1368-9

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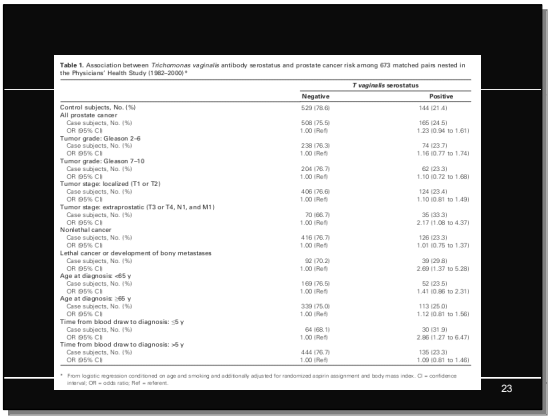

Table 1. Association between *Trichomonas vaginalis* antibody serostatus and prostate cancer risk among 673 matched pairs nested in the Physicians' Health Study (1982–2000) *

	T vaginalis serostatus	
	Negative	Positive
Control subjects, No. (%)	529 (78.6)	144 (21.4)
All prostate cancer		
Case subjects, No. (%)	508 (75.5)	165 (24.5)
OR (95% CI)	1.00 (Ref)	1.23 (0.94 to 1.61)
Tumor grade: Gleason 2–6		
Case subjects, No. (%)	238 (76.3)	74 (23.7)
OR (95% CI)	1.00 (Ref)	1.16 (0.77 to 1.74)
Tumor grade: Gleason 7–10		
Case subjects, No. (%)	204 (76.7)	62 (23.3)
OR (95% CI)	1.00 (Ref)	1.10 (0.72 to 1.68)
Tumor stage: localized (T1 or T2)		
Case subjects, No. (%)	406 (76.6)	124 (23.4)
OR (95% CI)	1.00 (Ref)	1.10 (0.81 to 1.49)
Tumor stage: extraprostatic (T3 or T4, N1, and M1)		
Case subjects, No. (%)	70 (66.7)	35 (33.3)
OR (95% CI)	1.00 (Ref)	2.17 (1.08 to 4.37)
Nonlethal cancer		
Case subjects, No. (%)	416 (76.7)	126 (23.3)
OR (95% CI)	1.00 (Ref)	1.01 (0.75 to 1.37)
Lethal cancer or development of bony metastases		
Case subjects, No. (%)	92 (70.2)	39 (29.8)
OR (95% CI)	1.00 (Ref)	2.69 (1.37 to 5.28)
Age at diagnosis: <65 y		
Case subjects, No. (%)	169 (76.5)	52 (23.5)
OR (95% CI)	1.00 (Ref)	1.41 (0.86 to 2.31)
Age at diagnosis: ≥65 y		
Case subjects, No. (%)	339 (75.0)	113 (25.0)
OR (95% CI)	1.00 (Ref)	1.12 (0.81 to 1.56)
Time from blood draw to diagnosis: ≤5 y		
Case subjects, No. (%)	64 (68.1)	30 (31.9)
OR (95% CI)	1.00 (Ref)	2.86 (1.27 to 6.47)
Time from blood draw to diagnosis: >5 y		
Case subjects, No. (%)	444 (76.7)	135 (23.3)
OR (95% CI)	1.00 (Ref)	1.09 (0.81 to 1.46)

* From logistic regression conditioned on age and smoking and additionally adjusted for randomized aspirin assignment and body mass index. CI = confidence interval; OR = odds ratio; Ref = referent.

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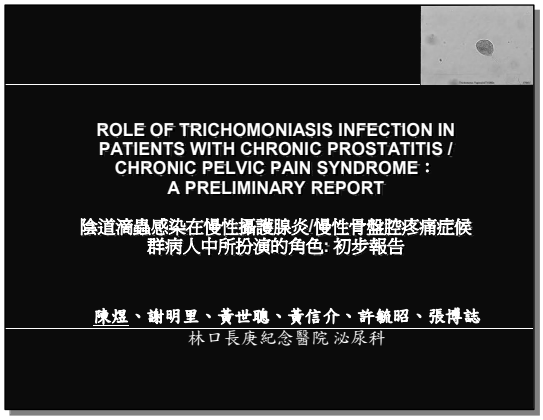
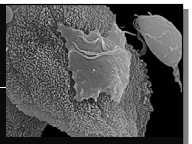


Purpose



- Chronic nonbacterial prostatitis or chronic prostatitis/chronic pelvic pain syndrome (CP/CPPS) (Class 3a/3b) is a pelvic pain condition in men
  and is a common consultation in urological clinic.
- Until nowadays, CP/CPPS is difficult to treat due to the etiologies are poorly understood, even though it accounts for 90%-95% of prostatitis diagnoses.
- This study is designed to discover if trichomoniasis infection is one of the causes in patients suffering from CP/CPPS.

25

Materials and Methods

- Between 29-Jan-2013 and 12-Apr-2013.
- 35 (28 - 69 y/o, mean: 43.5 y/o) patients who were diagnosed of CP/CPPS without associate underlying diseases that can be explained for these conditions were included.
- All patients received urine trichomonas vaginalis (TV) rapid test kid examination (JD's TV Ag Test kid) for infection confirmation.
- 5 patients sent self-void urine for the test.
- 30 patients sent post prostatic massage first-void urine for the examination.
- The prevalent rate of TV infection in patients with CP/CPPS and the treatment results with metronidazole were evaluated (NIH-CPSI-subscales addressing pain and recheck the TV Ag about 2 to 3 months later after treatment).

26

Results

The prevalent rate of trichomoniasis infection in patients with CP/CPPS was 20% (7/35).

One case was found to have TV infection in his self-void urine.

6 cases were found to have TV infection in their post prostatic massage first-void urine.

No any TV trophozoite was found in the direct smear under microscope in all 35 patients.

27

Results

NIH-CPSI-subscales addressing pain (score range 0–21) :

Significant treatment response in 6 of 7 patients: $p<0.001$

Pre-treatment mean score: 15.3

Post-treatment mean score: 4.2

After 4 to 8 (4 patients) weeks metronidazole treatment:

TV Ag change to negative in 5 of 6 above patients who felt improved a lot post-treatment.

TV Ag change to negative too in the patient who felt without improvement post-treatment.

28

Conclusion

- The infection rate of trichomoniasis is high (20%) in patients with CP/CPPS.
- The rapid test kid of TV is a suitable tool as a first line survey for these patients.
- The treatment result was encourage for the clinicians and provided benefit for the patients (effect rate 86%?).

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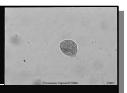
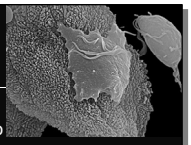


ROLE OF TRICHOMONIASIS INFECTION IN PATIENTS WITH HIGH PSA LEVEL BUT WITH NEGATIVE OF MALIGNANCY : A PRELIMINARY REPORT

陰道滴蟲感染在非攝護腺癌但高攝護腺特異抗原病人中所扮演的角色： 初步報告

陳煜、謝明里、黃世璁、黃信介、許毓昭、張博誌
林口長庚紀念醫院 泌尿科

Purpose



- Patients with high PSA level but with negative of malignancy are common to be found in urological clinic.
- Although the etiologies are variable in different conditions, bacterial or nonbacterial prostatitis was thought to account for some of the diagnoses.
- This study is designed to survey if trichomoniasis infection is as a cause of nonbacterial prostatitis in these patients.

31

Materials and Methods

- Between 29-Jan-2013 and 12-Apr-2013.
- 20 (35 – 83 y/o; mean 59.7 y/o) patients who ever received prostate biopsy due to high PSA level but without malignancy were enrolled in this study.
- All patients received urine or semen trichomonas vaginalis (TV) rapid test kid examination (JD's TV Ag Test kid) for infection confirmation.
- One patient sent semen for the test.
- 19 patients sent post prostatic massage first-void urine for the examination.
- The prevalent rate of TV infection in these patients was studied.
- The treatment results with metronidazole included post therapy PSA level change and TV Ag follow-up 3 months later were evaluated too.

32

Results

The prevalent rate of trichomoniasis infection in patients with high PSA level but with negative malignancy was 30% (6/20) with the rapid test kid of TV.

All 6 cases were found to have TV infection only in their post prostatic massage first-void urine.

No any TV trophozoite was found in the direct smear under microscope in all 20 patients.

33

Results

Patient	1	2	3	4	5	6
Pre-tx PSA (ng/ml)	7.56	8.93	4.88	17.41	5.88	20.23
Post-tx PSA (ng/ml)	6.95	8.83	4.92 *TV+*	18.87 *LUTS improved*	3.44	10.49

After 4 weeks metronidazole treatment:

TV Ag change to negative in 5 of 6 patients

34

Conclusion

- The infection rate of trichomoniasis is high (30%) in patients with high PSA level but without malignancy.
- The results account that nonbacterial prostatitis may be a causative etiology.
- The rapid test kid of TV is a suitable tool as a survey for these patients.
- The treatment result was encourage for the clinicians and provided benefit for the patients who concerned about their high PSA level (effect rate 33%?).

35

感染議題

Taiwanese Guideline on Ketamine Cystitis

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Ketamine abuse has been a significant social and clinical problem in Taiwan and overseas ethnic Chinese. Ketamine abuse may cause cystitis and related uropathy, e.g. hydronephrosis. The development of Ketamine cystitis after ketamine abuse is still under investigation. The natural course of Ketamine cystitis is unknown.

To solve the aforementioned clinical problems, we intend to conduct a National Registration on Ketamine cystitis and introduce a common way of diagnosis and treatment. At diagnosis of Ketamine cystitis, the following studies are essential: questionnaire regarding Interstitial cystitis, pain score, sexual function, mood and sleep quality; uroflowmetry + post-void residual urine; renosonography, renal and liver function tests, HIV and VDRL, CBC+platelet and Differential count. Optional studies are voiding diary, IVP or abdominal CAT scan, urodynamic study, transurethral or transureteral biopsy, and gastroeneteroscope, etc.

At treatment, pain killers should be provided. Antimuscarinics is the first line to increase bladder capacity. Oral or intravesical hyarulonic acid can be used later. The role of botox injection to detrusor is unknown but worthy of trial. The final means for contracted bladder is augmentation cystoplasty. Preservation of trigone is recommended and reimplantation of ureter is generally not recommended.

Followup on bladder and kidney function should be repeated every 3-6 months.

E1
江萬煊教授傑出研究論文獎

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Data on the Utilization of Treatment Modalities for ED in Taiwan in the Era of PDE5 Inhibitors

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Oral PDE5 inhibitors, intracavernosal injection and penile implants are mainstay treatments for ED. Data on their utilization reflect economic aspects of ED, but are underreported. We report utilization data and user characteristics for these modalities in Taiwan between 1999 and 2011. Sales data on PDE5 inhibitors—sildenafil citrate, tadalafil and vardenafil and on alprostadil were retrieved from International Market Services Health, and on penile implants from the local importing company for them. Users' clinical characteristics were derived from one institution. Between 1999 and 2011, sales of PDE5 inhibitors increased 5.9-fold, whereas those of alprostadil and penile implants remained stable. Over 90% of PDE5 inhibitors were purchased in pharmacies without a prescription. Between 1999 and 2011, the number of patients who received PDE5 inhibitors (n=4715) exceeded those who underwent penile injection (n=333) and penile implantation (n=108). The mean age of patients with ED who first received PDE5 inhibitors tended to decrease over consecutive years. Discontinuation of treatment with PDE5 inhibitors or intracavernosal injection reached 90% within 3 years of treatment initiation. Our data on the increasing market for PDE5 inhibitors and the trend for first use of PDE5 inhibitors at younger ages highlight the growing burden of ED and the acceptance of PDE5 inhibitors as the primary treatment for ED.

E2

男性學論文獎　一般醫師臨床組 第一名

J Sex Med 2014;11:230–239.

Factors Associated with Sex Hormones and Erectile Dysfunction in Male Taiwanese Participants with Obesity

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Introduction. Obesity has been receiving an increasing amount of attention recently, but investigations regarding the potential impact of obesity, sexual behaviors, and sex hormones on erectile dysfunction (ED) in men have not completely clarified the association.

Aim. To identify the relationship between ED, sexual behavior, sexual satisfaction, sex hormones, and obesity in older adult males in Taiwan.

Methods. Data were obtained from a baseline survey of 476 older adult males (≧40 years old). Their demographic data, body mass index (BMI), sex hormones, sexual desire, sexual satisfaction, and ED status were assessed.

Main Outcome Measures. The International Index of Erectile Function-5 (IIEF-5), Sexual Desire Inventory (SDI), and Sexual Satisfaction Scale (SSS) were used to assess ED, sexual desire, and sexual satisfaction.

Results. In all, 476 men were available for analysis. The mean age of the sample was 51.34 ± 7.84 years (range 40 to 70 years). The IIEF total score had a mean of 19.44 ± 4.98; 264 (55.5%) subjects had ED, 250 (52.9%) were currently obese (BMI ≧27), and 297 (62.4%) had metabolic syndrome. The results showed an increased risk of ED among obese men and subjects with lower levels of sex hormones and lower sexual desire. Testosterone levels were lower in subjects with obesity ($P < 0.001$). Among the predictors of ED, obesity (odds ratio [OR] = 1.62, 95% CI = 1.07–2.44, $P = 0.021$), abnormal high sensitivity C-reactive protein (hs-CRP) (OR = 10.59, 95% CI = 4.70–23.87, $P < 0.001$), and lower serum full testosterone (OR = 3.27, 95% CI = 2.16–4.93, $P < 0.001$) were significantly independent factors.

Conclusions. This study supports the idea of a close relationship between low levels of sex hormones, sexual desire, sexual satisfaction, obesity, and ED, and also shows that low free testosterone and hs-CRP may predict ED, even in obese populations.

E3
男性學論文獎　一般醫師臨床組 第二名

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Predictive Clinical Indicators of Biochemical Progression in Advanced Prostate Cancer Patients Receiving Leuplin Depot as Androgen Deprivation Therapy

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Therapeutic planning and counseling for advanced prostate cancer patients receiving androgen deprivation therapy (ADT) is complicated because the prognoses are highly variable. The purpose of this study is to identify predictive clinical indicators of biochemical progression (BCP). In this retrospective analysis, data from 107 newly diagnosed patients (from November 1995 to April 2008) with advanced prostate adenocarcinoma receiving Leuprorelin acetate depot were analyzed. Data was collected from the computerized registry of two collaborating medical centers in Taiwan. Cox regression and Kaplan-Meier analyses were used to evaluate the relationship between potential predictive parameters and BCP. Univariate analysis revealed that predictors of BCP included (1) initial serum prostate-specific antigen (PSA) (hazard ratio [HR], 1.00; 95% confidence interval [CI] 1.00–1.00); (2) log of initial PSA (HR, 1.35; 95% CI 1.17–1.56); (3) PSA density at diagnosis (HR, 1.00; 95% CI 1.00–1.01), and (4) pathological bone fracture (HR, 2.22; 95% CI 1.20–4.11). Age (HR, 0.94; 95% CI 0.91–0.98) and hemoglobin levels (HR, 0.86; 95% CI 0.76–0.97) were also associated with greater risk of BCP. After adjusting for age, pathologic fracture, and hemoglobin level, the initial PSA and PSA density were no longer significantly associated with BCP. However, age and hemoglobin levels continued to be associated with greater risk of BCP ($P \leq 0.007$). Using Kaplan-Meier analysis, patients with higher initial PSA concentration, pathological bone fracture, and low hemoglobin had a greater probability of BCP. Thus, low hemoglobin and age are predictive indicators of BCP and therefore early indicators of BCP despite ADT therapy.

E4

男性學論文獎　一般醫師基礎組 第一名

（財團法人鳳凰泌尿科學文教基金會論文獎）

Andrology, 2014, 2, 59-64.
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The Role of Sympathetic and Parasympathetic Nerve Systems on the Smooth Muscle of Rat Seminal Vesicles - Experimental Results and Speculation for Physiological Implication on Ejaculation

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Ejaculation is a process involving sympathetic and parasympathetic effects during different stages - emission and ejection. Some conditions of ejaculation dysfunction are associated with autonomic nerves. However, the exact effects of autonomic nerves on ejaculation are not well defined. Autonomic agonists induce different recorded trace patterns of seminal vesicular contraction. The different traces contain different components of phasic and tonic contraction, which may have physiological implications. In this study, we examined isolated rat seminal vesicle (SV) contraction by phenylephrine (PE), acetylcholine, and their respective antagonists and then speculated upon physiological roles of sympathetic and parasympathetic nerves on SV during ejaculation. We found that PE and Ach both achieved good contraction of rat SV. Compared to α1b for sympathetic and M1, M2 for parasympathetic receptors, α1a and M3 are the relatively dominant subtypes on rat SV. Adrenergic and cholinergic agonists cause different trace patterns of SV contraction. We speculated that the sympathetic effect is dominant during emission to squeeze seminal fluid out and that the parasympathetic effect is dominant during ejection to provide an anti-reflux effect on the ejaculatory duct.

E5
男性學論文獎　一般醫師基礎組 第二名

Int. J. Mol. Sci. 2013, 14, 22102-22116; doi:10.3390/ijms141122102

SEPT12-Microtubule Complexes are Required for Sperm Head and Tail Formation

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The septin gene belongs to a highly conserved family of polymerizing GTP-binding cytoskeletal proteins. SEPTs perform cytoskeletal remodeling, cell polarity, mitosis, and vesicle trafficking by interacting with various cytoskeletons. Our previous studies have indicated that *SEPTIN12*$^{+/+/+/-}$ chimeras with a *SEPTIN12* mutant allele were infertile.

Spermatozoa from the vas deferens of chimeric mice indicated an abnormal sperm morphology, decreased sperm count, and immotile sperm. Mutations and genetic variants of *SEPTIN12* in infertility cases also caused oligozoospermia and teratozoospermia. We suggest that a loss of SEPT12 affects the biological function of microtublin functions and causes spermiogenesis defects. In the cell model, SEPT12 interacts with α- and β-tubulins by co-immunoprecipitation (co-IP). To determine the precise localization and interactions between SEPT12 and α- and β-tubulins *in vivo*, we created *SEPTIN12*-transgene mice.

We demonstrate how SEPT12 interacts and co-localizes with α- and β-tubulins during spermiogenesis in these mice. By using shRNA, the loss of *SEPT12* transcripts disrupts α- and β-tubulin organization. In addition, losing or decreasing SEPT12 disturbs the morphogenesis of sperm heads and the elongation of sperm tails, the steps of which are coordinated and constructed by α- and β-tubulins, in *SEPTIN12*$^{+/+/+/-}$ chimeras. In this study, we discovered that the *SEPTIN*12-microtubule complexes are critical for sperm formation during spermiogenesis.

E6

男性學論文獎　住院醫師臨床組 第一名

Journal of the Chinese Medical Association 76 (2013) 624-628

The Role of Hormones on Semen Parameters in Patients with Idiopathic or Varicocele-related Oligoasthenoteratozoospermia (OAT) Syndrome

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Background: Oligoasthenoteratozoospermia (OAT) syndrome is the most frequently seen phenotype in male infertility. Spermatogenesis relies closely on hormone regulation. The aim of this study was to assess the correlation between hormone profile and semen parameters in infertile men with idiopathic or varicocele-related OAT syndrome. We tried to illustrate the correlative factors for better semen parameters in these patients.

Methods: A total of 96 patients with idiopathic or varicocele-related OAT were included for assessment. Serum levels of follicle-stimulating hormone (FSH), luteinizing hormone (LH), testosterone (T), estradiol (E2), prolactin (PRL), and the combinative ratios of these hormones, such as T/E2, T/FSH, T/LH, T/(FSH × LH), PRL × T/FSH, PRL × T/LH, PRL × T/(FSH × LH), were compared individually with sperm parameters. The parameters included sperm concentration, total sperm count (TC), percent motile sperm count, percent normal sperm count, total motile sperm count (TMC), total normal sperm count (TNC), and total motile normal sperm count (TMNC).

Results: T correlated well with percent normal sperm count ($p = 0.031$). PRL positively correlated with sperm concentration ($p = 0.019$), TMC ($p < 0.001$), TNC ($p = 0.003$), and TMNC ($p < 0.001$). In hormonal combinative ratios, T/FSH, T/LH, T/(FSH × LH), PRL × T/FSH, PRL x T/LH, and PRL x T/(FSH × LH) all showed significant correlations to concentration and count-related parameters including TC, TMC, TNC, and TMNC.

Conclusion: For patients with OAT syndrome, T, PRL, T/FSH, T/LH, T/(FSH × LH), PRL x T/FSH, PRL × T/LH, and PRL × T/(FSH × LH) may be used as predictive markers for better semen quality. This investigation could be a catalyst for future studies on the extent to which manipulating the hormonal combinative ratios can affect the quality of spermatogenesis in infertile males with OAT syndrome.

I-1

SEPT12-微管蛋白複合體參與精子頭部與尾部生成

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SEPT12-microtubules Complexes are Required for Sperm-head and -Tail Formation

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Objectives: The septin gene belongs to a highly conserved family of polymerizing GTP-binding cytoskeletal proteins. SEPTs perform cytoskeletal remodeling, cell polarity, mitosis, and vesicle trafficking by interacting with various cytoskeletons. Our previous studies have indicated that *SEPTIN12*$^{+/+/+/-}$ chimeras with a *SEPTIN12* mutant allele were infertile. Spermatozoa from the vas deferens of chimeric mice indicated an abnormal sperm morphology, decreased sperm count, and immotile sperm. Mutations and genetic variants of *SEPTIN12* in infertility cases also caused oligozoospermia and teratozoospermia. We suggest that a loss of SEPT12 affects the biological function of microtublin functions and causes spermiogenesis defects.

Materials and Methods: Co-immunoprecipitation (co-IP), knockdown, and immunofluorescence assays (IFA) were preformed to investigate the function of SEPT12-microtubulin complexes. We also created *SEPTIN12*-transgene mice for in vivo assay. Sperm collected from *SEPTIN12*$^{+/+/+/-}$ chimeras was also used in this study.

Results: In the cell model, SEPT12 interacts with α- and β-tubulins by co-immunoprecipitation (co-IP). To determine the precise localization and interactions between SEPT12 and α- and β-tubulins *in vivo*, we created *SEPTIN12*-transgene mice. We demonstrate how SEPT12 interacts and co-localizes with α- and β-tubulins during spermiogenesis in these mice. By using shRNA, the loss of *SEPT12* transcripts disrupts α- and β-tubulin organization. In addition, losing or decreasing SEPT12 disturbs the morphogenesis of sperm heads and the elongation of sperm tails, the steps of which are coordinated and constructed by α- and β-tubulins, in *SEPTIN12*$^{+/+/+/-}$ chimeras.

Conclusions: In this study, we discovered that the *SEPTIN*12-microtubule complexes are critical for sperm formation during spermiogenesis.

I-2

泌乳素對雄性大鼠精索靜脈曲張誘發之造精低常的效應

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The Effects of Prolactin on Varicocele-induced Hypospermatogenesis in a Rat Model

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Objectives: Varicocele is a pathological dilatation of the pampiniform plexus and the internal spermatic veins in the spermatic cord**.** It is the most common etiology of male infertility, and is a well-recognized cause of dysfunction of Leydig cell and impaired testosterone synthesis. Prolactin (PRL) plays a role in regulating the interaction between gonadotropins and the Leydig cells during testosterone secretion. The aim of this study is to investigate the effects of PRL and varicocele upon spermatogenesis in a rat model.

Methods and Materials: Male Sprague-Dawley rats (8 week-old) were divided into four groups, including cerebral cortex-grafted (CX), anterior pituitary-grafted (AP), and induced varicocele by partial ligation of the left renal vein (Vx) + CX or Vx + AP. Six weeks after varicocele surgery, the rats were sacrificed. The concentration of PRL in rat model was measured by the ELISA kit. We also measured the diameter of the spermatic vein, testicular weight, cauda epididymis sperm concentration and the motility of the all sub-group of rat model. Testicular tissues were studied for the protein expression of caspase 3 and 9.

Results: The cauda epididymis sperm concentration and the motility rate were both increased in the group of varicocele with AP-grafted rats (Vx + AP) compared to the group of varicocele with CX-grafted rats (Vx + CX). According to the western blots analysis for the apoptosis protein including caspase 3 and 9, varicocele with AP-grafted rats showed less caspase expression in testicular tissues.

Conclusions: In this study, we demonstrated that the increased PRL levels by AP grafting improve the testicular function in varicocele groups by inhibiting of apoptosis and increasing of sperm concentration and the motility.

I-3

睾丸癌病人精子冷凍保存的成功與其病理與生化指標的相關性研究

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The Biochemical and Pathological Correlates of Successful Semen Cryopreservation from Patients with Testicular Cancer

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Objective: To determine the predictors for success with regards to semen cryopreservation and good semen quality of patients with testicular cancer.

Materials and Methods: A total of 50 men (aged 16-36 years) with testicular cancer, referred for semen cryopreservation prior to gonadotoxic treatment were included. Age, α-FP, β-HCG, LDH and pathological reports were evaluated as correlates of successful semen cryopreservation and good semen quality.

Results: The overall success rate was 52%. α-FP was significantly higher in the failure group as compared to the success group (4113.1 vs 81.2 ng/ml). The seminoma to non-seminomatous germ cell tumors (NSGCT) ratio was lower in the failure group as compared to the success group (9/17 vs 3/21). There was nearly a significant difference ($p=0.066$). Other parameters did not reach significant difference in both groups. The optimal cut-off value for α-FP>1000 ng/ml showed the highest Youden index (0.689), and resulted in a sensitivity of 0.625 and specificity of 1.0 for predicting poor outcome. In terms of multivariate analysis, the α-FP($p=0.013$) and α-FP>1000ng/ml($p=0.010$) were significantly associated with poor semen quality and failure to preserve semen.

Conclusions: Elevated α-FP is an independently poor factor for semen quality and semen cryopreservation. In clinical use, patients with α-FP>1000ng/ml should be informed of the high risk of potential issues regarding semen quality and semen cryopreservation.

I-4

陰道滴蟲感染在不孕併膿精症病人中所扮演的角色：初步報告

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Role of Trichomoniasis Infection in Patients with Infertility and Pyospermia: A Preliminary Report

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Purpose: Male patients with infertility and pyospermia are common to be found in urological clinic. Although the etiologies are variable in different conditions, bacterial or nonbacterial infection was thought to account for some of the diagnoses. This study is designed to survey if trichomoniasis infection is as a cause of nonbacterial infection in these patients.

Materials and Methods: Between 29 January 2013 and 2 April 2014, 46 patients (mean age: 35.7 years old) who were diagnosed of infertility with pyospermia and no response to antibiotic treatment were included. 31 of 46 patients had the diagnosis of varicocele too. All patients received semen or urine trichomonas vaginalis (TV) rapid test kid examination (JD's TV Ag Test kid) for infection confirmation. 10 patients sent semen for the test and another 36 patients sent post prostatic massage first-void urine for the examination. The treatment results with metronidazole included post therapy semen parameters change and TV Ag follow-up 3 months later were evaluated too.

Results: The prevalent rate of trichomoniasis infection in patients with pyospermia was 30.4% (14/46) with the rapid test kid of TV. All 14 cases were found to have TV infection only in their post prostatic massage first-void urine. No any TV trophozoite was found in the direct smear under microscope in all 46 patients. Lost follow-up was found in 2 patients. After 4 to 12 weeks metronidazole treatment, TV antigen changed to negative in 8 of 14 patients (2 patients received 2 times TV Ag follow-up after 10 to 12 weeks treatment). Semen parameters especially sperm motility increased significantly were observable in 7 of 8 patients. Positive TV Ag was found in 4 patients even though they received more than 12 weeks treatment. The effect rate was 58.3 % (7/12) or 87.5% (7/8).

Conclusion: The infection rate of trichomoniasis is high in infertile patients with pyospermia and the results account that nonbacterial infection may be a causative etiology. The rapid test kid of TV is a suitable tool as a first line survey for these patients. The treatment result was encourage for the clinicians and provided benefit for the patients who concerned about their fertility.

I-5

外科手術取得精子進行單精子卵胞質注射術之婦科預後因子分析

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Prognostic Factors of ICSI Cycles Using Surgically Retrieved Sperm

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We evaluated our experience of intracytoplasmic sperm injection (ICSI) cycles using sperm from either microsurgical epididymal sperm aspiration (MESA), needle or micro-dissection (MD) testicular sperm extraction (TESE). This is a retrospective statistical analysis of data from 134 ICSI cycles, from Sep. 1, 2011 to Aug. 31, 2014. A total of 118 women whose husbands were azoospermia received ICSI treatment at Taipei Veterans General Hospital. The fertilization rate was 67.01%. Good embryo rate was 61.29%. Clinical pregnancy rate was 29.85%. Ongoing pregnancy rate (OPR) was 26.87%. During the 3-year course, the OPR of the last year was significantly better than the earlier 2 years (32.73 vs 22.78%). The OPR of obstructive azoospermia was almost double that of non-obstructive ones (34.21 vs 17.24%). The average number of egg yield of pregnant patients is more than that of non-pregnant ones (15.15 vs 10.73). Therefore, in obstructive type of azoospermia, more oocytes retrieval number, along with more experienced laboratory do contribute to better prognosis. Real time touch print testicular smear method to confirm mature spermatozoa, delicate study beforehand to locate testicular sperm-rich areas, pre-treatment with hormone to improve spermatogenesis, and combined-trigger to get more good-quality eggs might also improve the successful rates.

I-6

在臺灣男性族群血脂肪與精液品質之相關性探討

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Relationship between Lipid Profiles and Semen Quality in Taiwanese Male Population

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Purpose: The objective of this study is to evaluate the relationship between lipid profiles and semen quality including sperm concentration, motility percentage, forward motility percentage and morphology percentage.

Materials and Methods: We performed a cross-sectional study between January 2008 and May 2013 in a standard medical screening program run by a private firm (MJ Health Management Institution, Taipei, Taiwan). The lipid profiles including triglyceride, total cholesterol, HDL, LDL, VLDL serum concentration and cholesterol ratio were examined. Four dependent semen parameters including sperm concentration, sperm motility percentage, forward sperm motility percentage and morphology percentage were recorded. Moreover we also compared the semen parameters with different lipid profiles and analyzed the prevalence of abnormal semen parameters according to various lipid concentrations.

Results: Data from 7,210 men were analyzed using Pearson chi-square correlation to semen quality. Total cholesterol, cholesterol ratio and LDL revealed significantly inverse correlation with sperm morphology from the ANOVA statistical method. Triglyceride and VLDL showed statistically negative correlation with sperm concentration. Total cholesterol and LDL were inversely correlated with the total and progressive sperm motility with statistical significance. Triglyceride and cholesterol ratio only negatively influence the progressive sperm motility.

Conclusion: Our findings demonstrate that serum lipids may affect semen quality parameters, highlighting the importance of cholesterol and lipid homeostasis for male fecundity.

I-7

年輕男性合併克林菲特氏症候群及無精蟲症之生育能力保留

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Fertility Preservation in Young Men with Klinefelter's Syndrome and Azoospermia

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Objective: To study the clinical characteristics and sperm retrieval rate in young men with Klinefelter's syndrome (KS)

Materials and Methods: Three young men with KS, aged less than 20-year-old, who were referred for hypogonadism and fertility counselling and underwent microsurgical testicular sperm extraction (microTESE) were retrospectively reviewed. Their medical history, physical examination findings, testicular volume, serum hormone parameters, microTESE outcome were analyzed.

Results: All three patients were non-mosaic XXY. Increased serum FSH and LH levels as well as decreased testosterone levels were noted in all patients. Two of three patients had elevated serum estradiol levels. All patients had bilateral testicular atrophy (less than 5 ml for each testicle). None of them received testosterone replacement therapy prior to microTESE. Spermatozoa were retrieved in two patients (66.7%). Two patients with complete Sertoli cell-only syndrome and one patient with hypospermatogenesis were noted in testicular histopathology.

Conclusions: Fertility preservation might be proposed to young KS patients with azoospermia, and the testosterone replacement therapy can be initiated after sperm retrieval.

I-8

非阻塞性無精症合併造精功能低下的病人臨床表徵及取精成功率

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Clinical Characteristics and Sperm Retrieval Outcomes in Non-obstructive Azoospermic Men with Hypospermatogenesis

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Introduction: Hypospermatogenesis (HS) is highly prevalent in non-obstructive azoospermic men (NOA); however, an in-depth analysis of the causes, clinical features and treatment outcomes have not yet been reported.

Materials and methods: Patients with biopsy-proved HS and without seminal tract obstruction were enrolled between January, 2004 and December, 2013 in an university infertility clinic. This retrospective cohort study included 90 patients with NOA and HS. The severity of HS was subdivided into three groups (mild, moderate, and severe) based on their respective spermatogenic score. The causes of HS, clinical features, treatment, and sperm retrieval outcomes were compared among the groups. Factors affecting the successful sperm retrieval in patients with HS were analyzed.

Results: The prevalence of HS in our NOA patients is 41.3% (90/218). Twenty-eight (31.1%) patients had at least one prior/current testicular insult, and the most testicular insults were heat exposure and varicocele. Twelve (13.2%) patients had genetic anomalies, with six having chromosomal anomaly (47, XXY) and another six having Y-chromosome microdeletion (AZFc deletion). Twenty-three (25.6%) patients were categorized as mild HS, 26 (28.9%) patients were moderate HS, and 41 (45.6%) patients were severe HS. Patients with mild HS tended to have higher frequency of testicular insults, whereas patients with severe HS had a significantly higher frequency of genetic anomalies. Removal of testicular insults lead to sperm in ejaculates in four of 17 (23.6%) patients. All patients with mild and moderate HS had successful sperm retrieval; however, 36 of 41 (87.8%) patients with severe HS met with success. No pre-operative parameters were significant predictors of sperm retrieval in our patients.

Conclusions: This is the first study to demonstrate the clinical characteristics and treatment outcome in patients with NOA and HS. The causes of severe HS differ significantly from those with mild or moderate HS, the spermatogenesis might be induced in mild HS patients and biopsy-proved HS did not ensure a successful sperm retrieval.

Key words: azoospermia; hypospermatogenesis; sperm retrieval; genetic anomaly

I-9

利用微流道晶片在智慧型手機上測量精子品質---原型機與初步結果

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Counting Sperms by Microfluidic Sperm Chips Applied on Smart Phones-Prototype and Preliminary Performance

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Objectives: Testing sperm quality at home has been indicated for male fertility screening and monitoring. Some commercial kits have been introduced in the market for years, such as Babystart®, Fertell® and SpermCheck®. However, they are all based on immunological reactions and color change and the testing results are read subjectively. We introduced and fabricated a novel at-home sperm analyzer "iSperm" (including microfluidic chips applied on smart phones and image analyzing technologies) and compared the performance between conventional sperm analysis (CSA) and this system.

Materials and Methods: The iSperm were fabricated according to our design. 13 semen specimens were checked by CSA and iSperm respectively. The iSperm measured both total and motile sperm number using the same chip for 6 times. The results by 2 methods were compared and correlated with each other.

Results: There was good correlation in total sperm count between iSperm and CSA ($r^2=0.70$; $p<0.01$), and in motile sperm between MSC and CSA ($r^2=0.81$; $p<0.01$).

Conclusions: The iSperm (including microfluidic chips applied on smart phones and image analyzing technologies) fulfilled the need for at-home sperm counting. And the performance of iSperm is comparable with CSA for total sperm count and motile sperm count.

S-1

飲食控制與運動介入對代謝症候群民眾性功能之效果

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The Effects of Diet Control and Exercise Intervention on the Sexual Function in People with Metabolic Syndrome?--A Prospective Controlled Study

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Objectives: Metabolic syndrome (MetS) clustered multiple risk factors of developing cardiovascular and chronic diseases. Recent studies have revealed MetS and type 2 diabetes are negatively correlated with sexual function in aging male and female. We evaluated the effect of an exercise-and-healthy-diet-based intervention for 12 weeks on anthropometric data, risk factors of metabolic syndrome and sexual function in community people at risk with metabolic syndrome.

Materials and Methods: This was an institutional review board-approved, prospective, non-randomized controlled study. Overweight volunteers with apparently healthy status were recruited. The selection criteria included subjects 20 years old or above with a body mass index (BMI) equal to or greater than 24 kg/m2 or a waist circumflex (WC) >85 cm in men or >75 cm in women. All subjects were assigned into either intervention or control group according to their willing. Subjects in the intervention group participated a 12-week program including circuit exercise training combined endurance and resistance exercises (2～3 times per week) and healthy lifestyle modification. Subjects in the control group maintained their usual daily activities. The blood pressure (BP), BMI, WC, serum fasting sugar (FS), serum total cholesterol (TC), triglyceride (TG) level and sexual function index [international index of erectile function (IIEF) in male and female sexual function index (FSFI) in female] were obtained at baseline and the moment after 3 months' intervention. The parameters before and after intervention were analyzed. They were also compared between the intervention and control group.

Results: A total of 44 subjects (22 male and 22 female) with mean age 44.95 (range 27–63) were enrolled in this study consisting of 35 persons in intervention and nine in control group. At baseline, there were no significant differences in age, BP, BMI,WC, FS, TC, TG and sexual function index scores between subjects in the two groups. At 3 months, significantly decreased BP, WC, FS, TC, TG ($p=0.000$, 0.000, 0.039, 0.002 and 0.003 respectively) were found in subjects in intervention but not control group when compared with baseline data. However, no significant change could be observed in IIEF or FSFI score in both groups after a three months' experiment.

Conclusions: Our results suggested a short-term exercise-and-healthy-diet-based intervention could effectively ameliorate most of the risk factors for MetS but not sexual function index in community people at risk with MetS. Further investigation for a long-term intervention might be warranted.

S-2

台灣男性肥胖勃起功能障礙和性荷蒙相關因子研究

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Factors Associated with Sex Hormones and Erectile Dysfunction in Male Taiwanese Participants with Obesity

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Introduction: Obesity has been receiving an increasing amount of attention recently, but investigations regarding the potential impact of obesity, sexual behaviors and sex hormones on erectile dysfunction (ED) in men have not completely clarified the association.

Aim: To identify the relationship between ED, sexual behavior, sexual satisfaction, sex hormones and obesity in older adult males in Taiwan.

Methods: Data was obtained from a baseline survey of 476 older adult males (≧40 years old). Their demographic data, body mass index (BMI), sex hormones, sexual desire, sexual satisfaction and ED status were assessed.

Main Outcome Measures: The International Index of Erectile Function-5 (IIEF-5), Sexual Desire Inventory (SDI) and Sexual Satisfaction Scale (SSS) were used to assess ED, sexual desire and sexual satisfaction.

Results: In all, 476 men were available for analysis. The mean age of the sample was 51.34 ± 7.84 years (range, 40 to 70 years). The IIEF total score had a mean of 19.44 ± 4.98; 264 (55.5%) subjects had ED, 250 (52.9%) were currently obese (BMI ≧27), and 297 (62.4%) had metabolic syndrome (MetS). The results showed an increased risk of ED among obese men and subjects with lower levels of sex hormones and lower sexual desire. Testosterone levels were lower in subjects with obesity ($P<0.001$). Among the predictors of ED, obesity (OR=1.62, 95% CI=1.07-2.44, $p=0.021$), abnormal high sensitivity C-reactive protein (hs-CRP) (OR=10.59, 95% CI=4.70-23.87, $p<0.001$) and lower serum full testosterone (OR=3.27, 95% CI=2.16-4.93, $p<0.001$) were significantly independent factors.

Conclusions: This study supports the idea of a close relationship between low levels of sex hormones, sexual desire, sexual satisfaction, obesity and ED, and also shows that low free testosterone (FT) and hsCRP may predict ED, even in obese populations.

Key Words: Erectile Dysfunction; Obesity; The International Index of Erectile Function-5 (IIEF-5); Testosterone; Sexual desire; Sexual satisfaction; High sensitive C-reactive protein

S-3

安非他命濫用男性的性功能障礙

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Sexual Dysfunction in Men Who Abuse Amphetamine

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Objectives: Amphetamine is reported to have various effects on male sexual function but most studies have been based on small case number and lacked control group. A cross-sectional case-control observation study was conducted to assess the impact of amphetamine on male sexual function.

Methods and Materials: Male amphetamine users in a Drug Abstention and Treatment Center in southern Taiwan were recruited to complete the questionnaire. The questionnaire consisted of the International Index of Erectile Function (IIEF) and several global assessment questions to assess the impact of sexual function after use of drugs. Participants who reported to have used drugs other than amphetamine were excluded from the study. All the data depended on self report and were compared with an age-matched control. The participants had to provide the signed written informed consent to join the study without any obligation or payment. The Institutional Review Board approved the study protocol.

Results: The study period was conducted from 2006 to 2011. There were 1216 amphetamine mono-drug users whose data were eligible for analysis with a mean age of 31.5 years and a mean duration of drug use of 30.0 ± 51.1 months. Of the amphetamine users, erectile function was reported more to have decreased (30.4%) than enhanced (15.8%) and ejaculatory latency time was reported more to have delayed (36.9%) than shortened (16.2%) and orgasmic intensity was reported more often to have decreased (28.7%) than increased (16.8%) after use. Positive or negative impact was equally reported in the function of sexual desire and sexual satisfaction among users. About half of the drug users reported no change of sexual function after use of amphetamine.

Dosing frequency of amphetamine had a significant association with its impact on user's sexual function, but duration of drug use had not. The IIEF domain scores of erectile function, orgasmic function and overall satisfaction were significantly lower in the drug users than the controls, but no significant difference was noted in other domains. The prevalence of erectile dysfunction (ED) was significantly higher in the drug users than in the controls, (21.3% vs. 9.8%, p <0.001). The higher risk for ED of the drug users remained true after adjustment of other risk factors.

Conclusions: The impact of amphetamine on male sexual function varies among users, and there are some deleterious effects on sexual functioning for many individuals.

S-4

早洩病患的臨床表現特徵

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Clinical Presentations of Men with Premature Ejaculation

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Objectives: To report the clinical characteristics of men who sought medical treatment for premature ejaculation (PE)

Methods and Materials: Consecutive men who complained of PE at outpatient clinics were enrolled into the study. Participants signed the written informed consent and answered a 22-item self-administered questionnaire that contained questions regarding demographic data, comorbidities and previous treatment for PE, Premature Ejaculation Diagnostic Tool (PEDT) and Sexual Health Inventory for Men. Intravaginal ejaculatory latency time (IELT) was determined by participants' self-estimate. The Institutional Review Board reviewed and approved the protocol.

Results: A total of 251 participants with PE were recruited into study from Mar. to Oct., 2014 with a mean age of 49.5 ± 12.2 years (20–76) and a peak incidence at 50–59 years group (30.7%). The mean IELT was 75.8 ± 58.5 seconds (3-300). Based on the classification of the PEDT, 85.7% (215) had PE and 6.4% (16) had probably PE. Of the patients, 47.0% (118) were lifelong type and 53.0% (133) were acquired type. Acquired PE had a longer mean IELT (88.4 vs. 61.7 seconds, $p < 0.001$) and a higher prevalence of ED than lifelong PE (64.7% vs. 46.6%, $p = 0.004$). Of the 377 patients with ED, 32.7% (123) admitted to be bothered by PE, whereas of the 251 PE patients, 56.2% (141) had ED in the same period. PE subjects concurrent with ED were older in age, were more likely to be acquired PE, and had a longer IELT and a higher prevalence of comorbidities (all $p < 0.05$). Of the PE subjects, 56.0% (140) responded to have ED if assessed by the global assessment question, whereas 91.6% (229) were categorized into ED determined by the SHIM total score ≤21. A total of 19.5% (49/251) ever sought medical treatment for PE prior to the visit. Half of them received therapy with long-acting serotonin reuptake inhibitors (53.0%) and traditional Chinese Medicine (55.1%). Over 80% reported a little or no improvement from those therapies.

Conclusion: Patients with acquired type PE have a longer IELT and a higher prevalence of ED than those with lifelong type. PE and ED often coexist and active screening is recommended in men with sexual dysfunction.

S-5

必利勁治療早洩的效果與安全性

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Effectiveness and Safety of Dapoxetine in the Treatment of Premature Ejaculation

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Objectives: To assess the effectiveness and safety of dapoxetine (Priligy®) in the treatment of premature ejaculation (PE)

Methods and Materials: Subjects who received dapoxetine for the treatment of PE were invited to answer a self-administered questionnaire in follow-up visits in the outpatient clinics. The questionnaire contained 21 items, including the Clinical global Impression (CGI) to evaluate the effectiveness of treatment, the Premature Ejaculation Diagnostic Tool, and the Sexual Health Inventory for Men. The responder to treatment was defined as who chose minimally better, much better or very much better in the CGI "Compared to before starting treatment, would you describe your PE problem?" Those who chose the rest answers were considered nonresponder. The Institutional Review Board approved the study protocol.

Results: Of 264 PE patients, 243 (92.0%) with a mean age of 49.7 years received dapoxetine therapy, whereas 53.0% (129) of them had dapoxetine monotherapy and 47.0% (114) combined with phosphodiesterase-5 (PDE5) inhibitors from Mar. to Nov., 2014. Of 243 treated patients, 121 (49.8%) had follow-up visits and completed the post-treatment questionnaire. Both the IELT and PEDT score had significantly improved after treatment, compared with baseline (p <0.001). According to the results of CGI, 74.4% (90) of the patients had at least slightly better after treatment. There was no significant difference in mean age, baseline data and types of PE between responders and nonresponders. The satisfaction rate of taking dapoxetine in delaying ejaculatory latency, control over ejaculation, and overall effect was 37.8%, 36.1% and 42.0%, respectively. Dizziness (34.5%), nausea (10.6%) and somnolence (11.5%) were the most commonly reported adverse effects of dapoxetine but most were mild and transient, whereas 48.7% (55) of the patients did not experience any adverse effect. There was no any event of syncope in the study.

Conclusions: Treatment with dapoxetine, if necessary combined with PDE5 inhibitors, had satisfactory results in the aspects of IELT, PEDT score and CGI in patients with PE. Adverse effects were mild and tolerable.

S-6

設計陰莖靜脈截除手術臨床試驗的倫理及技術考量

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Ethical and Technical Considerations in Designing a Clinical Trial for a Physiological Penile Venous Stripping Surgery

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It is not uncommon to encounter a surgery which is temporarily controversial in medicine, however, it is extremely rare to resort the penile venous surgery for restoring erectile function, that has sustained such an extended dispute. For over a century, the merit for performing it to treat veno-occlusive dysfunction has never been firmly established. In order to provide the most robust evidence (level 1), we propose a clinical trial. As much insight has been gained in our understanding of the penile venous, tunical and related anatomy over the past decades, and despite its notorious past, the most advanced version, physiological penile venous stripping (PPVS) rather than merely ligation, has been developed to improve the safety and efficacy of penile venous surgery. Given the anticipated hurdles in adopting a conventional randomized controlled trial (RCT) design for PPVS, this paper describes a RCT design incorporating independent enrollment, randomization by order, quadruple blinding and half-quarter-quarter to challenge the feasibility for a PPVS while maintaining the scientific and ethical integrity. The customized approach is based on the internationally acknowledged ethical principles from the Good Clinical Practice, the Declaration of Helsinki and the Belmont Report. Therefore this RCT is sustainable in ethical and technical considerations.

ED-1

探討飲食元素與血管內皮功能在男性勃起功能障礙族群中之相關聯性

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Exploration of the Association between Dietary Intake and Endothelial Function among Male Erectile Dysfunction Population

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Purpose: The aim of present study was to evaluate the association between dietary intake and endothelial function among the erectile dysfunction males attending for clinics.

Materials and Methods: We performed a prospective study between March 2014 and June 2014 at the urology OPD in Tri-Service General Hospital. Forty-four patients were enrolled and filled out the IIEF (the international index of erectile function) questionnaire. The 24-hour dietary recall and peripheral arterial tonometry (PAT) were conducted. Augmentation index (AI%) and reactive hyperemia index (RHI%) were represented systematic arterial stiffness and endothelial-dependent vasodilation respectively.

Results: Our final results showed that vegetable intake which portions adjusted by 1000 kcal of, were negatively related to IIEF score. A negative correlation between AI% and IIEF score and between AI% and exchange of whole grain intake were observed. In addition, RHI% was marked associated with intake of poly-unsaturated fatty acid.

Conclusion: Dietary intakes were related to endothelial function among ED patients, especially whole grain products and the vegetables. Detailed the mechanism of pathogenesis should be examined in future larger study.

ED-2

年輕男性勃起障礙合併不孕症問題：初步報告

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Infertile Issue in Young Men with Erectile Dysfunction: Primary Report

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Objectives: Erectile Dysfunction is a popular male sexual dysfunction and more prevalent among men over 40 years. The most common causes of erectile dysfunction in young men are psychological factors like anxiety. Although men of infertile couple have a higher incidence of erectile dysfunction, many infertility males seek clinical ED treatment without talking about the infertile issue.

Materials and Methods: Men younger than 40 years visited our clinic for erectile dysfunction was routinely surveyed about infertile issue from January to October 2014. IIEF 5 questionnaire was used for erectile function survey. The sexual history and system disorders of all patients were routine recorded on clinical charts. All patients received laboratory studies including testosterone, prolactin and metabolic profiles. Medical prescriptions for erectile dysfunction were also reviewed.

Results: Total 182 males with erectile dysfunction and younger than 40 years were surveyed and 21 (11.5%) males have infertile issue recorded. None of them actively mentioned the infertile issue in consultation. Only Seven patients of them have metabolic abnormality in laboratory examination. The testosterone level less than 350ng/dl was found in 4 cases. Nighty percent of ED males with infertile issue received PDE5 inhibitors prescriptions and all have improvement on erection function at follow-up.

Conclusions: Infertile factor is an important issue in young men with erectile dysfunction although patients ignore it in consultation. Infertile issue should be routinely ruled out in young men who complain of erectile dysfunction.

ED-3

中草藥加強勃起功能障礙病人接受陰莖靜脈截除手術後的治療效果：隨機臨床試驗

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Herb Formula Enhances Treatment of Impotent Patients after Penile Venous Stripping, A Randomized Clinical Trial

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Objectives: Herbs has been regarded as an aphrodisiac in treating impotence for many centuries despite little true scientific evidence. Our latest refined penile venous stripping technique (PVS) is effective in treating impotence, although this procedure remains controversial. A synergic effect of PVS and oral herbs has become routine in our practice but lacked rigorous scientific proof. The objective of this report reviews our experience with this combination.

Materials and Methods: From August 2010 to March 2014, 263 males underwent PVS. Among these, 67 unsatisfied men chose additional salvage therapy and were randomly assigned to either oral herbs (n=35) or placebo treatment (n=32) respectively. All were evaluated with the international index of erectile function (IIEF-5) scoring and our dual pharmaco-cavernosography.

Results: The pre-op IIEF-5 scores for the herb group was 9.7±3.7 postoperative 13.9±3.3 and post-herb 19.6, while the control group scores were: pre-op 9.3±4.1, post-op 14.5±3.6 and 15.1±3.5 post-placebo respectively. Although there was no significance between the two groups preoperatively and post-operatively, statistical significance was demonstrated post-salvage therapy (19.6±3.4 vs. 15.1±3.6, $p < 0.001$).

Conclusions: It appears that the combination of oral herbs and PVS treatment may provide an enhanced outcome to impotent patients refractory to medicine and unsatisfied with PVS monotherapy alone.

ED-4

先前已接受過血管介入式治療的勃起功能障礙病人接受陰莖靜脈截除手術恢復勃起功能

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Salvaging Penile Venous Stripping for Erection Restoration in Patients had Undergone Prior Varied Vascular Intervention

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Objectives: Varied penile vascular interventions are still controversial and commonly regarded as experimental settings. Disappointing outcome and penile dysmorphology are major concerns along with other complications. To explode whether our penile venous stripping can salvage other methods of vascular treatment, we report our experience.

Materials and Methods: From 2010 to 2014, 11 consecutive patients sought our assistance owing to disappointing prior vascular interventions elsewhere. The abridged five-item version of the International Index of Erectile Function (IIEF-5) was used to score the patients. A circumferential incision was first made to access the deep dorsal veins and cavernosal veins which were stripped thoroughly and ligated with 6-0 nylon sutures. A median longitudinal pubic incision was used to complete the stripping proximally and the para-arterial veins were just ligated segmentally. Finally the wound was fashioned layer by layer with 5-0 chromic suture.

Results: The operation time was from 4.0 to 8.5 hours. The follow-up period ranged from 0.6-4.0 years. Overall all patients reported satisfactory penile morphology postoperatively while the preoperative and postoperative IIEF-5 scores was significant difference (8.8 ± 2.6 vs.16.6 ± 2.8, $P < 0.001$).

Conclusions: This series of salvaging venous surgeries, though technically challenging, was exclusively beneficial and appeared a viable option to patients who had undergone prior vascular interventions.

ED-5

勃起功能障礙病患未診斷的心血管疾病風險因子的盛行率

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Prevalence of Undetected Cardiovascular Risk Factors in Men with Erectile Dysfunction

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Objectives: To determine the prevalence of undetected cardiovascular (CV) risk factors in men with erectile dysfunction (ED)

Methods and Materials: Consecutive men who sought treatment for ED at outpatient clinic were routinely screened with questions of "*Have you been diagnosed with disorder of glucose, blood pressure or lipid profiles by physician before, respectively*?" The responses were categorized as yes or no (including those responding with "not sure'). Patients had blood pressure measurement and blood sampling for laboratory test on fasting state. diabetes mellitus (DM) was defined as fasting blood sugar ≥126 mg/dl or Hba1c ≥7.0, impaired fasting glucose as fasting blood sugar 100–125 mg/dl, hypertension (HT) as systolic ≥140 or diastolic ≥90 mmHg, and abnormal total cholesterol as serum level ≥200 mg/dl, triglyceride (TG) as ≥ 150 mg/dl, low-density lipoprotein (LDL) as ≥130 mg/dl and high-density lipoprotein (HDL) as <40 mg/dl. Erectile function was assessed by the Sexual Health Inventory for Men. Participants signed the written informed consent. The study protocol was approved by the Institutional Review Board.

Results: A total of 2,610 ED patients presented at the institution from 2010 to 2014. After excluding 548 subjects with incomplete data, 2062 subjects' data were eligible for analysis. Of the subjects, 74.2% (1530) denied having disorder of glucose, 63.5% (1309) denied having HT, and 64.0% (1320) denied having disorder of lipid profiles. Those who had been diagnosed with disorder were older and had a lower SHIM score than those who had not (p <0.001). Of 1530 subjects who denied having glucose disorder, 5.9% (90) met the criteria of DM and 31.5% (482) had impaired fasting glucose. Of 1309 subjects who denied having blood pressure disorder, 39.3% (515) met the criteria of HT. Of 1320 subjects who denied having dyslipdemia, abnormal total cholesterol, TG, LDL, and HDL levels were detected in 28.4% (375), 27.2% (356), 12.1% (139) and 36.2% (421), respectively. Of all the ED patients (2610), 30.2%, 61.5% and 74.3% had abnormal glucose, blood pressure and lipid profiles, respectively and those who had disorders were older in mean age than those who had not (p <0.001). Of them, 88.7% (1830) had at least one CV risk factor with a mean age of 54.2 years whereas only 11.3% (232) were free of any risk factor with a mean age of 43.6 years (p <0.001).

Conclusions: CV risk factors were high prevalent in men with ED and a higher age is associated with them. Because a substantial part of patients did not recognize them when they sought treatment for ED, routine screening for them is recommended.

ED-6

入珠

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Penile Prepuce Bead Implants

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Objectives: Penile prepuce bead implants or genital beading is a form of body modification which involves the implantation of beads under the skin of penile shaft. These are performed primarily for the purpose of physical erotic stimulation (for both the wearer and their partner), as well as everywhere for aesthetic reasons. We will discuss the motivation of bead implantation and the reason of bead removal.

Materials and Methods: This is retrospectively descriptive study. From 2003 to 2013 we have collected 38 patients with penile prepuce implants. The materials included plastic, wood, glass, stainless steel and agate. The implanted beads were from one to ten. The surgery for the infected genital beading should excise the bead combining with the surrounding infected soft tissue.

Results: We can not calculate the prevalence of the people who have prepuce beading implants. We could only find the cases occasionally when they sought for the medication examination and the occasion of the infection of implanting beads. Perfecting surgical techniques and postoperative management had led to fewer adverse events.

Conclusions: As well as being an aesthetic practice, this is usually intended to enhance the sexual pleasure of partners during vaginal or anal intercourse. Genital beading is more commonly done by men in detention center or jail.The patients asked for medical aid to remove the bead implants because of reasons such as (1) infection (2) uncomfortable sexual intercourse (3) no enhancement on the sexual pleasure (4) sexual partner dislike.

B-1

分層萃取中藥淫羊藿中活性成分及對大鼠血管的影響

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Extracts of *Epimedium brevicornum* Maxim Relax Rat Corpus Cavernosum

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Objectives: *Epimedium brevicornum* Maxim (Berberidaceae) (Eb), an ornamental herb grown in Asia and the Mediterranean region has been used for various medicinal purposes, especially in male erectile dysfunction. Our recent studies suggested that Eb can relax the rat aorta. Therefore, the aim of this study is to investigate the effect of different Eb extract elicitation of vasorelaxation in rats.

Materials and Methods:
Eb preparations
Eb (300 gm) was extracted with 1 l water (water-soluble fraction, denoted as EPW), which were further purified until the total volume down to 100 ml. The extracts were filtered through layers of gauze, the residues discarded and the filtrates were kept at -20℃, followed by lyophilizing the samples. The final powder weight was 4.53 g. For further purification, EPW was subfractioned into EP-0, EP-20, EP-50, EP-100 by elution of 0, 20, 50 and 100% methanol through Diaion HP20 column, respectively.

Rat animal models
Male Sprague-Dawley rats weighting 250–300 gw were treated under the regulations of the 'Principles of laboratory animal care' (NIH publication No. 86–23, revised 1985). After overnight fasting with free access to water, rats were anesthetized and killed with overdoses of intramuscular injection of ketamine hydrochloride (50 mg/kg) and xylazine (5 mg/kg). The organ bath for aorta strips was prepared. In brief, the entire aorta tissue was transected from the heart, quickly rinsed and kept immersed in oxygenated Krebs' physiological solution at 37℃.

Evaluation of relaxation on the aorta tissues
Aorta strips were first contracted with Phenylephrine (1 mM) and responses were examined using cumulative concentration–response curve (CRC) by increasing the concentration of agents after a steady response to the previous administration had been reached. After confirming the model validity, the responses of Eb extracts or its vehicle were obtained by adding agents cumulatively to the organ bath. Construction of CRC was based on degrees of relaxation of the Phenylephrine induced contractions.

Results: Results showed that water extract of Eb concentration-dependently antagonized phenylephrine (PE)-induced vasoconstriction at the concentrations ranging from 0.001 to 1 mg/mL with an EC50 of 12.4 ± 1.5 μg/mL. Eb evoked vasorelaxation was significantly. Further extractions can not potentiate the relaxation effects.

Conclusions: Although the active components of Eb are not yet clear, its physiological effects on vascular beds were correlated with the putative pharmacological activities of *Epimedium brevicornum* which implicate it as a potential for the treatment of hypertension.

B-2

中藥淫羊藿對大白兔勃起功能的影響

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Pro-erectile Effect of *Epimedium brevicornum* Maxim Extract on Rabbit Corpus Cavernosum

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Objectives: Water extract of *Epimedium brevicornum* Maxim (Eb) has been reputed to have sexual stimulation effects on male for decades in Chinese Medicine. Our objective is to discover the active portion of Eb, and assay the bioactivity.

Materials and Methods:
Eb preparations
Eb (300 gm) was extracted with 1 l water (water-soluble fraction, denoted as EPW), which were further purified until the total volume down to 100 ml. The extracts were filtered through layers of gauze, the residues discarded and the filtrates were kept at -20℃, followed by lyophilizing the samples. The final powder weight was 4.53 g. For further purification, EPW was subfractioned into EP-0, EP-20, EP-50, EP-100 by elution of 0, 20, 50 and 100% methanol through Diaion HP20 column, respectively.

Isolation of rabbit corpus cavernosum
Male New Zealand rabbits weighting 2.5–3 kg were treated under the regulations of the 'Principles of laboratory animal care' (NIH publication No. 86–23, revised 1985). After overnight fasting with free access to water, rabbits were anesthetized and killed with overdoses of intramuscular injection of ketamine hydrochloride (50 mg/kg) and xylazine (5 mg/kg). The organ bath for rabbit corpus cavernosum strips was prepared. In brief, the entire penile tissue was transected from the base, quickly rinsed and kept immersed in oxygenated Krebs' physiological solution at 37℃.

Evaluation of relaxation on the corpus cavernosum
Corpus cavernosum strips were first contracted with Phenylephrine (1 mM) and responses were examined using cumulative concentration–response curve (CRC) by increasing the concentration of agents after a steady response to the previous administration had been reached. After confirming the model validity, the responses of Eb extracts or its vehicle were obtained by adding agents cumulatively to the organ bath. Construction of CRC was based on degrees of relaxation of the Phenylephrine induced contractions.

Results: The bioactivity of the water crude extract (EP) and further extract EP-20 was tested for the relaxation effect in CC strips precontracted with 1 mM PE. The results showed that both EP and EP-20 relaxed the PE-precontracted Corpus cavernosum strips in a concentration-dependent manner. The 50% relaxation concentration of EPW and 25% of EP-20 were 65 and 208 mg/ml, respectively. Pre-incubation of Eb extracts increases the potency and the duration of the phosphodiesterase 5 inhibitor relaxation effects.

Conclusions: We concluded that extracts of Eb relax the corpora cavernosa smooth muscle. This preliminary results might bring into perspective the treatment of erectile dysfunction.

B-3

以大鼠模式探討K他命濫用與勃起功能障礙的相關性

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Long-term Administration of Ketamine in a Rat Model is Associated with Erectile Dysfunction

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Objectives: Erectile dysfunction (ED) is impaired relaxation of the corpus cavernosum smooth muscle, and it is also associated with a reduction in neuronal and endothelium-derived nitric oxide (NO) localized levels. Ketamine has been shown to inhibit the expression of neuronal nitric oxide synthase (nNOS) and endothelial nitric oxide synthase (eNOS) in the spinal dorsal horn and umbilical vein endothelial cells. However, the relationship between long-term ketamine administration and ED has not been reported. The aim of the study was to assess the impact of long-term ketamine administration on ED.

Materials and Methods: Thirty-two male Sprague-Dawley rats were randomly divided into four groups: the control group received saline daily Intraperitoneal (IP) Injection, and the other three groups received ketamine (100 mg/kg/day) daily IP injection for 1, 2, and 3 months, respectively. In each group, erectile function was assessed by cavernous nerve (CN) electrostimulation. The functional evaluation was checked by intracavernous pressure (ICP), area under curve (AUC) and ICP/MAP (mean arterial pressure) ratio. CN and penile tissues were collected for histological analysis. Immunofluorescence assay (IFA) was performed for nNOS, ß-III tubulin, and alpha smooth muscle actin antibody. Additionally, Masson trichrome staining was also performed to determine the smooth muscle/collagen ratio. Data were analyzed using one-way analysis of variance and Scheffe post hoc test.

Results: In comparison with control group, rats treated with 3-months daily ketamine injection showed significantly decrease in maximal ICP ($P < 0.001$), maximal ICP/MAP ratio ($P < 0.001$), and AUC ($P < 0.001$). IFA revealed not only markedly lower nNOS expression in the dorsal penile nerve fibers ($P < 0.05$), but also significantly decreased smooth muscle cell content in 3-months daily ketamine injection group compared with the control group ($P < 0.05$). In addition, Masson trichrome staining showed long-term ketamine administration markedly decreased the smooth muscle/collagen ratio ($P < 0.05$).

Conclusions: Long-term ketamine administration had adverse effects on erectile function.

B-4

研究平滑肌前驅細胞對雙側海綿體神經損傷引發勃起功能障礙大鼠的效果

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The Effect of Smooth Muscle Progenitor Cells on Erectile Function in Bilateral Cavernous Nerve Injury Rat Model

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Objectives: There are reports of animal experiments using intracavernosal stem cells injections to improve erectile function after cavernous nerve (CN) damage. This study investigate investigate the therapeutic effects and mechanism of intracavernosal smooth muscle progenitor cells (SPCs) injections on erectile function in a bilateral cavernous nerve injury rat model simulating the status of erectile function in human after radical prostatectomy.

Materials and Methods: Bone marrow cells were isolated from femurs in male Sprague-Dawley rats and cultured in vitro for 30 days to facilitate SPCs. Dual immunofluorescent staining showed that SPCs expressed both α-smooth muscle actin (αSMA, a specific marker for smooth muscle) and the CD34 (abundant on precursor cells). All 24 rats were randomly and equally divided into three groups: sham surgery, injury (nerve crushed and vehicle-only), and experimental (nerve crushed and SPCs treatment) groups. Erectile function was assessed by measuring maximum intracavernosal pressure (Max ICP), change in ICP (ΔICP), area under ICP curve (AUC), ratio of change in ICP and mean arterial pressure (MAP；ΔICP/MAP) , and ratio of Max ICP and MAP (Max ICP/MAP). Penile tissue was immunohistomorphometrically analyzed to evaluate the expression of αSMA and smooth muscle cell content.

Results: Max ICP and all other functional parameters of erectile function were significantly reduced in injury versus sham and SPCs treatment groups ($p < 0.001$). Smooth muscle cell content was reduced in injured-controls versus sham and SPCs treatment groups.

Conclusions: SPCs treatment restored erectile function in a rat model of bilateral CN injury through recruitment of smooth muscle cells in the corpus cavernosum. These findings elucidate the therapeutic potential of SPCs for treating erectile dysfunction (ED) in humans.

B-5

奈米化 DHA 對雙側海綿體神經損傷引發勃起功能障礙大鼠的效果

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The Effect of Nano-DHA on Erectile Function in Bilateral Cavernous Nerve Injury Rat Model

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Objectives: Let nano Docosahexaenoic acid (nano-DHA) intracavernosally inject to penile tissue to improve erectile function after cavernous nerve (CN) damage. This study investigate the therapeutic effects and mechanism of intracavernosal nano-DHA injections on erectile function in a bilateral cavernous nerve injury rat model simulating the status of erectile function in human after radical prostatectomy.

Materials and Methods: Docosahexaenoic acid (DHA) is well-known a neuroprotectant against experimental stroke. Nano-DHA (Concentration of DHA in nanoemulsion is 126.7 μg/mL; Concentration of 3-5 nm Nanogold in nanoemulsion is 51.0 μg/mL). Rats were randomly and equally divided into five groups: sham, surgery, injury (nerve crushed and vehicle-only), and experimental (nerve crushed and 3 kinds of dose for treatment, 10, 50, and 250 μg/kg nano-DHA) groups, respectively. Erectile function was assessed by measuring maximum intracavernosal pressure (Max ICP), change in ICP (ΔICP), area under ICP curve (AUC), ratio of change in ICP and mean arterial pressure (MAP; ΔICP/MAP), and ratio of Max ICP and MAP (Max ICP/MAP). Penile tissue was immunohistomorphometrically analyzed to evaluate the expression of neural nitric oxide synthase (nNOS), and smooth muscle cell content (α-smooth muscle actin).

Results: Max ICP and all other functional parameters of erectile function were significantly reduced in injury versus sham and 50 μg/kg nano-DHA treatment groups ($p < 0.05$). Smooth muscle cell content was reduced in injured-controls versus sham and 50 μg/kg nano- DHA groups (both $p < 0.05$).

Conclusions: 50 μg/kg nano-DHA of treatment restored erectile function in a rat model of bilateral CN through preservation of smooth muscle cells in the corpus cavernosum. These findings elucidate the therapeutic potential of nano-DHA for treating erectile dysfunction (ED) in humans.

B-6

人類陰莖白膜：解剖發現、功能上的證據及在重建手術扮演的角色

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Human Penile Tunica Albuginea: Anatomy Discovery, Functional Evidence and Role in Reconstructive Surgery

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In the human penis the corpora cavernosa (CC) is a hydraulic system which can anatomically be assorted into the smooth muscle and skeletal muscle components. The former includes CC sinusoids and vasculature while the latter are bulbocavernosus, bulbospongiosus, tunica albuginea (TA) and distal ligament. Erection is a result of interplaying two components via supplying arteries and draining veins. Clinicians believed TA to be a single circular layer before 1991 when a model of a bi-layered structure was discovered as a 360° complete inner circular layer and a 300° incomplete outer longitudinal layer which is absent bordering the CC and corpus spongiosum. In the erection process the outer longitudinal layer plays a pivotal role in closing the emissary veins, which ascertain veno-occlusive mechanism. Although this peculiar design is considerable for allowing ejaculate passing, it is vulnerable to dilator trauma during penile implantation on the TA without outer longitudinal layer which is responsible for penile morphology and thereafter is the targeted tissue for corporoplasty. Overall this new TA anatomy is prerequisite to surgeon whom is going to carry out penile implant or penile morphologic reconstruction regardless attempting surgery is for patching the TA shortage sector or excising the TA excessive region.

P-1

對於小於五公克之經尿道攝護腺切片術是否需要合併膀胱頸切開術?

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For Resection Weight Less than Five Gram by Transurethral Biopsy of Prostate, is it Necessary to do Combined Transurethral Incision of Bladder Neck? --- A Nation-wide Database Study

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Objectives: The transurethral biopsy of prostate (TUBP), which in Taiwan means the resection weight less than five gram, may be either for cancer diagnosis or attempted to treat bladder outlet obstruction. However, acute urinary retention (AUR) after TUBP is still a complication of great concern, especially for those without Foley indwelled previously. Combined transurethral incision of bladder neck (TUIBN) may be suggested, especially for those with symptoms of bladder outlet obstruction instead of diagnosis for prostate or bladder cancer. However, to do the combined TUIBN or not, that is the question. Therefore, this article is aimed to analyze AUR after transurethral biopsy of prostate in Taiwan according to the claims of the National Health Insurance (NHI) program.

Materials and Methods: From the NHI Research Database of Taiwan, we applied for the all the claims of patients who ever visited urology clinic during 2006 to 2010. In this urology profile, we received all the records of both admission (DO and DD files) and ambulatory clinics (OO and CD files). Codes for TUBP (<5g), TUIBN were adopted. AUR was defined as any kind of indwelling catheterization within 2 weeks after TUBP with or without TUIBN. Patients younger than 40 years old were excluded. Patients who received TUIBN or optic or otis urethrotomy within 1 year before TUBP and 2 months after TUBP were excluded, as well as those who had TUBPs within 2 months between each surgery or long admission period (14 dats) after TUBP. Patients who had diagnosis of prostate or bladder cancer within 3 months peri-operatively were excluded. ICD-9 codes for hypertension (HTN), diabetes mellitus (DM), cerebral vascular disease (CVA), spinal stenosis (SS), and herniated intervertebral disc (HIVD) were used for disease confirmation only when the diagnoses from DD or CD files existed at least one year before TURP. Descriptive and comparative analyses were performed.

Results: In this urology profile, there were 2597 TUBPs performed, including 2497 TUBPs only (group A) and 100 TUBPs with combined with TUIBN (group B). The hospitalization days mainly ranged from 3 to 5 days. The mean age was 72.45, with 72.69 and 71.86 in group A and B respectively. Among all patients included, 245 of them were associated with AUR (9.43%), with 9.69% and 3.00% in group A and B (P=0.022), with the odds ratio of 2.17. Patient who had previous AUR episodes within 2 months before TUBP didn't have significantly higher post-OP AUR rate (11.24%) than those without AUR before TUBP (8.88%) (P=0.083). About co-morbidities, HTN, DM, CVA, SS, and HIVD were not significant risk factors for AUR after TUBP (P=0.934, 0.426, 0.111, 0.976, and 0.362 respectively). In multivariate analysis, combined TUIBN or not is the only significant factor to AUR after TUBPs. (P=0.039)

Conclusion: By the NHI database, we found that in Taiwan, most patients treated with TUBPs are not combined with TUIBN, even after excluding those diagnosed of prostate or bladder cancer. However, AUR rate is significantly lower in patients receiving combined TUBP with TUIBN, regardless of pre-OP Foley indwelling or other co-morbidities. Although further randomized clinical trials are still necessary, it implies that for patients with bladder outlet obstruction treated with TUBP (smaller resection weight of TURP), combined TUIBN may be beneficial, especially regarding the post-OP AUR episodes.

P-2

骨盆器官的惡性腫瘤對男性患者膀胱功能的影響

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Urinary Bladder Function of Male Patients with Pelvic Organ Oncology

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Purpose: The primary function of urinary bladder is for urine storage and voiding. Pelvic organ malignancy may deteriorate the originally normal bladder function via either neurogenic or myogenic way. The aim of this study is to explore the characteristics of bladder function of the male patients with pelvic organ malignancy.

Materials and Methods: A retrospective chart review study was performed. From the urodynamic studies records, male patients with pelvic organ malignancy were enrolled. Patients' gender, age, origin of malignancy, were recorded and analyzed. Male patients receiving urodynamic studies with benign causes were excluded.

Results: From January 2012 to October 2014, there were 406 male patients eligible for urodynamic analysis. Pelvic organ malignancies included prostatic (177/406), bladder (128/406), and colonic (101/406) origin. Age ranged from 45 to 90 years (mean 72.2 years). The urodynamic studies were demonstrated by uroflowmetry and cystometry. In uroflowmetry (328 cases), the mean ± standard deviation of maximal urine flow rate was 12.7 ± 6.3 ml/sec. In cystometry (89 cases), the origins of oncology were colon 43.8% (39/89), prostate 39.3% (35/89) and bladder 16.9% (15/89). Bladder contractility showed hyper-reflexia (44/89), detrusor areflexia (20/89), normoreflexia (13/89), and detrusor hypo-reflexia (12/89). Most of bladder dysfunction was in colonic 59.4% (19/32), followed by prostate 31.3% (10/32) and bladder group 9.3 % (3/32).

Conclusions: Male patients having pelvic organ malignancies may suffer from urination dysfunction. Usually decreased urine flow rate and abnormal contractility of detrusor muscle are demonstrated. The physicians are encouraged to be aware of these urinary complications in male with pelvic organ oncology.

P-3

婚姻狀況是影響攝護腺癌生活品質的獨立因子：混合效果模型分析

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Marital Status is an Independent Determinant of Quality of Life in Prostate Cancer Patients: A Mixed Effect Model Analysis

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Objectives: Prostate cancer has become one of major male malignancies in Asia, including Taiwan. However, there were several characteristics different from western countries, such as stage distribution, attitude to therapy modality, and response to androgen deprivation therapy. Little is known about the factors concerning general quality of life. Therefore, the current study is to investigate the factors that influence quality of life in patients of prostate cancer which may provide information for decision making in clinical practice.

Materials and Methods: Patients with prostate cancer diagnosed and treated at our hospital received patients' self-reported questionnaires at outpatient basis. The used questionnaire is World Health Organization Quality of Life- BREF (WHOQOL-BREF). After collecting the responses, the determinants including age, education, economic income, marital status and disease status were analyzed using a mixed effect model.

Results: From January 2013 to July 2014, a total 248 patients and 404 person-time received WHOQOL-BREF questionnaire, including localized disease (n=110), locally advanced (n=48), metastatic disease (n=90). Among these three group, there were no difference in aspects of age (p=0.14), education (p=0.27), personal income (p=0.86), marital status (p=0.22), and cardiovascular comorbidity (p=0.86). Comparing to married patients, single/divorced/widowed patients had better quality of life in the domains of physical health (p=0.152), social relationship including sexual satisfaction (p=<0.0001) and environment (p=0.02). Comparing to higher personal income patients (more than US$1667 monthly), patients with lower ones worse quality of life in the domains of physical health (p=0.001), psychological (p<0.0001) and environment (p<0.0001). Patients with metastatic disease had poorer responses in the domain of physical health (p<0.0001). There was no obvious decrement in quality of life among patient with cardiovascular comorbidities (Table 1).

Conclusion: Our data demonstrated marital status is an important determinant of quality of life in prostate cancer in south Taiwan, as well as personal income. Patients with married status suffer more showed poorer response among physical health, social relationship, and environment domains. The underlying reason is worth to explore in future.

P-4

銩雷射攝護腺手術後併發急性腎衰竭：兩案例報告

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Acute Renal Failure after Thulium Laser Prostatectomy: Two Cases Report

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Objectives: Acute renal failure is a severe complication of transurethral resection of the prostate (TURP) which have been reported since the late 1940s. Though laser prostatectomy has been considered as a safer and more effective procedures than TURP, three cases were noted to have acute renal failure after Potassium-Titanyl-Phosphate laser vaporization of prostate recently. Herein, we reported two cases of acute renal failure after Thulium laser prostatectomy.

Materials and Methods: We retrospectively analyzed 236 patients undergoing Thulium laser prostatectomy from 2010 to 2014. Of them, two (0.8%) patients suffered from acute renal failure postoperatively. The age of these two patients was 67 and 71 years old, respectively. The prostate size was 81.5 and 81.3 mL, respectively. The operative time was 85 and 90 minutes, respectively. Cystostomy was placed in both patients.

Results: No prostatic capsular perforation or other intraoperative complications were observed. No severe hyponatremia or electrolyte imbalance was noted. The blood loss was 10 and 30 mL, respectively. These two patients suffered from oligoanuria on postoperative day 1 and were treated with hemodialysis therapy. The renal function recovered and the serum creatinine level backed to the baseline on the postoperative day 9 and 14, respectively. No renal biopsy was performed.

Conclusion: Acute renal failure is a rare but serious complication after laser prostatectomy and it needs to clearify the etiology and establish the prevention.

P-5

以海福刀治療前列腺癌之罕見併發症病例報告：尿失禁或尿瀦留

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Rare Complication of HIFU Treatment in Cancer of Prostate: Incontinence or Urine Retention

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Case Report

HIFU is introduced since 20 years ago in France. And it's widely applied in treating prostate adenocarcinoma in Europe. More than 30,000 patients was treated in the world, and more than 300 cases in Taiwan. The most common complication of HIFU is urethral stricture, it was approximate 20% reported in literature. We has one rare complication of urine incontinence or retention occurred in the same patient. The etiology was found the residual adenoma in anterior wall, the possible mechanism is check valve like mechanism. We report our experience in treating this complication.

This is a 74 years male patient of adenocarcinoma of prostate stage cT2N0M0.PSA=17.32ng/ml. Pathology showed Gleason score=4 (2+2). He received TURP and HIFU therapy on Sep.9th 2014.Postoperative course was smooth. Initial urine leaks was mild but complete urine retention was occurred one month after HIFU therapy. Cystoscopy showed much necrotic tissue in the prostate lumen. After transurethral removal the necrotic tissue. He has normal voiding without leakage. However, he has suffered from decreased urine caliber and complete urine leaks after 10 am but no leaks after sleep. Cystoscopy showed a check valve like residual adenoma in anterior was of prostate which obstructs the lumen and cause urine retention. The residual adenoma may be indicated the incomplete destruction of the anterior wall while HIFU therapy. When prostate anterior-posteriorsize is larger than 3cm in diameter. Transurethral resection was done and patient recovered without incontinence.

P-6

經直腸超音波隨機切片分佈對於攝護腺癌之臨床意義—南台灣5450針之分析

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Clinical Relevance of Prostate Cancer Mapping via Transrectal Random Biopsy-analysis of 5450 Cores in South Taiwan

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Introduction: Systemic random biopsy of the prostate under the guidance of transrectal ultrasound has become essential for prostate cancer diagnosis. However, little is known whether the prostate biopsy mapping data can provide more information. The aim of this prospective study was to evaluate the localization of prostate cancer foci via a 10-core random biopsy and the association with pathological staging in south Taiwan.

Materials and Methods: From September 2005 to June 2014, 1314 men received TRUS-guided biopsy were performed at our hospital and 545 patients were enrolled for the analysis of the prostate cancer mapping after exclusion 769 patients due to non-random biopsy. The analyses included the differences of prostate cancer foci according to the digital rectal finding (DRE), as well as the association with pathological staging.

Results: Among 545 patients, 152 (27.9%) were positive for prostate cancer, including 64 of 370 (17.3%) men with negative digital rectal examination (DRE) and 88 of 175 (50.3%) men with abnormal DRE. Prostate cancer patients with abnormal DRE exhibit significantly higher age (71.0±7.6 *vs.* 67.9±6.1, p=0.008), higher PSA(25.5±24.5 *vs.* 15.7±11.2, p=0.003), higher PSA level (p =0.016) and PSA density (0.71±0.67 *vs.* 0.41±0.36, p=0.002), higher percent positive core (p =0.022) and higher Gleason score (p =0.0006) than those with normal DRE. There is no difference of positive core frequency in term of biopsy site. Patient with more positive cores in lateral sites have higher pathological stage (p= 0.031), as well as in parasagittal sites (p=0.007) and apical sites (p=0.023).

Conclusions: The characteristics of prostate cancer diagnosed from prostate random biopsy are different according to the DRE finding. After stratification by DRE, there is no site difference in the frequency of positive prostate cancer foci. The number of positive cores is significantly associated with higher patholol gical staging. Therefore, prostate biopsy mapping can provide an important information in determining the treatment policy.

P-7

探討經直腸超音波攝護腺切片在 50 歲以下高攝護腺指數年輕族群的效益

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Clinical Efficacy of Transrectal Prostate Needle Biopsy in Men Younger than 50 Years with an Elevated Prostate-Specific Antigen Concentration (＞4.0 ng/mL) Based on Biopsy Results and Follow-up Status

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Objectives: Prostate cancer (PCa) is rare in men younger than 50 years. The 2013 AUA guideline discourages screening for men younger than 40 years because of the relatively low prevalence of PCa in this age group and the absence of any evidence demonstrating the benefits of screening. Despite the guidelines, PSA screening has increased for younger group because of increasing routine health exams. We retrospectively investigated the clinical efficacy of transrectal ultrasonography-guided prostate biopsies (TRUSP Bx) in men younger than 50 years with high PSA concentration (＞4.0 ng/mL).

Materials and Methods: We retrospectively reviewed charts of male patients who received twelve core TRUSP Bx at Taipei Veterans General Hospital from January 2008 to December 2013. Patients younger than 50 y/o were identified and those people whose PSA < 4 were excluded. The age of the patients, numbers of biopsies, DRE results, pathologic findings, how many times the PSA was checked and periods of follow-up before and after the procedure, concentrations of PSA and fPSA, total prostate volume, clinical symptoms and complication of fever after the procedure were recorded and analysed.

Results: In 60 patients who received the procedure in the study period, 5 people were excluded for PSA < 4 (The indication of TRUSP Bx biopsy was abnormal sonography finding). Total 55 patients were enrolled. The prevalence of Prostate adenocarcinoma was 9.09% (5/55). The age was 42.45.48.48.49 respectively. 2 patients (ageed 30, 50, respectively) presented post TRUSP Bx fever. The average PSA was 9.80 (range: 5.77-92.2, standard deviation=13.51). The average total prostate volume was 29.48. (range 9.3-109, standard deviation=15.77) Abnormal DRE was found in 5 patients (9.09%). There was no Gleason >8 tumours in patient's younger than 50 y/o and Gleason >7 tumours in patient younger than 45. The rate of fever after procedure under 40 years old was 6.67% (1/15).

Conclusion: The yielding rate of TRUSP Bx is low in patient younger than 40 y/o with elevated PSA concentrations (＞4.0 ng/mL). Other adjuvant diagnostic modality such as fPSA or MRI maybe needed to obviate unnecessary TRUSP Bx.

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以高能聚焦超音波(海福刀)治療前列腺癌的初步結果

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Preliminary Results of High-intensity Focused Ultrasound in the Treatment of Prostate Cancer

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Objectives: To report our preliminary results of high-intensity focused ultrasound (HIFU) in the treatment of prostate cancer.

Materials and Methods: 31 patients with localized prostate cancer (T1-2N0M0) were treatment with Ablatherm™ HIFU device. We investigated the efficacy using post-treatment prostate specific antigen (PSA) levels and complications.

Results: 31 patients age from 61 to 88, pretreatment PSA from 3.05 to 23 ng/mL, Gleason score from 6 to 9. Post-treatment PSA level :<0.008 ng/ml -4.05 ng/ml . The PSA level increased gradually in all patients during follow-up. Post-treatment complications including urge incontinence (30%), bladder outlet obstruction (20%) and one case developed acute renal failure.

Conclusions: High-intensity focused ultrasound therapy appears to be an effective and minimally invasive therapy only in lower risk localized prostate cancer. Potential complications and cost-efficacy should be concerned.

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