本會成立宗旨：

以非營利為目的之社會團體，以結合國內外熱心人士從事血脂異常及其相關疾病之衛生教育、學術研究、疾病預防及臨床服務等工作為宗旨。

本會成立目標：

- 舉辦衛教活動
- 推動學術研究
- 舉辦學術演講及討論會
- 參與國際相關組織及活動
- 結合熱心人士及團體以推動血脂異常之防治工作
- 其他與章程所訂宗旨及任務相關事項

委員會成員名單：

理　事　長：陳文鍾

榮譽理事長：李源德

常 務 理 事：陳明豐、陳茂元

理　　事：王宗道、王國陽、林幸榮、胡啟民、殷偉賢
許勝雄、陳肇文、葉宏一、賴文德、黃建華

常 務 監 事：廖朝崧

監　　事：王水深、林中生

秘　書　長：吳造中

秘書(聯絡人)：陳素文 02-23123456*88560

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台灣血脂衛教協會 *Taiwan Association of Lipid Educators*

2017上半年度北、中、南學術研討會

Holistic Care for the Patients with Cardiovascular Diseases: Controversies and Issues in 2017 (Part I)

【台北】：106 年 1 月 14 日 (星期六) 13:00-16:50

國立台大醫學院 - 一樓 C 區 102 講堂

Time	Topic	Speaker	Moderator
13:00-13:25	登記與接待		
13:25-13:30	**Opening Remarks**		吳造中 秘書長
13:30-14:15	Confronting Complexity to Glycemic Control: Practical Strategies to Simplify Type 2 Diabetes Care	翁瑄甫 醫師	吳造中 秘書長
14:15-15:00	SGLT2 Inhibitor- Paradigm Shift in Diabetes Management	蔡松昇 醫師	王光國 主　任
15:00-15:15	點心時間		
15:15-16:00	New Insights on the Use of Acarbose for Management of T2DM	石光中醫師	黃建華 理　事
16:00-16:45	Choosing Anti-diabetic Drugs in the Treatment of Type 2 Diabetes	賴史明 醫師	葉宏一 理　事
16:45-16:50	**Closing Remarks**		葉宏一 理　事

【台北】：106 年 1 月 15 日 (星期日) 08:30-17:35

國立台大醫學院 - 一樓 C 區 102 講堂

Time	Topic	Speaker	Moderator
08:30-08:55	登記與接待		
08:55-09:00	**Opening Remarks**		陳茂元 常務理事
09:00-09:45	臺灣三高冠心照護的現況與未來	吳造中 醫師	陳茂元 常務理事
09:45-10:30	Taiwan AF Guideline: The Clinical Practice for SPAF	蔡佳醍 醫師	林幸榮 理　事
10:30-10:45	點心時間		
10:45-11:30	From Hypertension to Protection: Contribution to ARB	邱俊仁 醫師	王水深 監　事
11:30-12:15	HTN Treatment Strategy Update: After the SPRINT Study	陳冠群 醫師	陳文鍾 理 事 長
12:15-12:30	年會		陳文鍾 理 事 長
12:30-13:30	午餐		
13:30-14:15	Statin Role Beyond Lipid Care	江建勰 醫師	廖朝崧 常務監事
14:15-15:00	Statin Treatment and New-Onset Diabetes Mellitus	王治元 醫師	胡啓民 理　事
15:00-15:15	點心時間		
15:15-16:00	New Perspectives on the Treatment of Mixed Dyslipidemia	謝敏雄 醫師	陳肇文 理　事
16:00-16:45	The Role of Prescription Omega-3 in CKD Patients with Dyslipidemia	吳允升 醫師	陳明豐 常務理事
16:45-17:30	Improve the Cardiovascular Outcome: Advanced Consideration for Hyperlipidemia Management with Combination Therapy in High Risk Patients	柯欣榮 醫師	陳文鍾 理 事 長
17:30-17:35	**Closing Remarks**		陳文鍾 理 事 長

《最終節目表依大會公告爲準》

台灣血脂衛教協會 *Taiwan Association of Lipid Educators*

2017上半年度北、中、南學術研討會

Holistic Care for the Patients with Cardiovascular Diseases: Controversies and Issues in 2017 (Part I)

【台中】：106 年 1 月 22 日 (星期日) 08:30-17:05

台中榮民總醫院 - 研究大樓一樓 - 第二會議室

Time	Topic	Speaker	Moderator
08:30-08:55	登記與接待		
08:55-09:00	**Opening Remarks**		陳茂元 常務理事
09:00-09:45	Statin Treatment and New-Onset Diabetes Mellitus	王俊興 醫師	陳茂元 常務理事
09:45-10:30	HDL, Atherosclerosis, and Emerging Therapies	林維文 醫師	陳茂元 常務理事
10:30-11:15	The Role of Prescription Omega-3 in CKD Patients with Dyslipidemia	周哲毅 醫師	陳茂元 常務理事
11:15-12:00	Improve the Cardiovascular Outcome: Advanced Consideration for Hyperlipidemia Management with Combination Therapy in High Risk Patients	曹承榮 醫師	陳茂元 常務理事
12:00-13:00	午餐		
13:00-13:45	Confronting Complexity to Glycemic Control: Practical Strategies to Simplify Type 2 Diabetes Care	洪逸芷 醫師	王國陽 理　事
13:45-14:30	Choosing Anti-diabetic Drugs in the Treatment of Type 2 Diabetes	賴史明醫師	王國陽 理　事
14:30-15:15	New Insights on the Use of Acarbose for Management T2DM	傅家保 醫師	王國陽 理　事
15:15-15:30	點心時間		
15:30-16:15	HTN Treatment Strategy Update: After the SPRINT Study	林圀宏 醫師	林中生 監　事
16:15-17:00	From Hypertension to Protection: Contribution to ARB	邱俊仁醫師	林中生 監　事
17:00-17:05	Closing Remarks		林中生 監　事

《最終節目表依大會公告爲準》

台灣血脂衛教協會 *Taiwan Association of Lipid Educators*

2017上半年度北、中、南學術研討會

Holistic Care for the Patients with Cardiovascular Diseases: Controversies and Issues in 2017 (Part I)

【高雄】： 106 年 2 月 19 日 (星期日) 08:30-17:30

高雄醫學大學附設中和紀念醫院 - 啓川大樓六樓 - 第一會議室

Time	Topic	Speaker	Moderator
08:30-08:55	登記與接待		
08:55-09:00	**Opening Remarks**		許勝雄 理事
09:00-09:45	Improve the Cardiovascular Outcome: Advanced Consideration for Hyperlipidemia Management with Combination Therapy in High Risk Patients	黃偉春 醫師	許勝雄 理　事
09:45-10:30	Statin Treatment and New-Onset Diabetes Mellitus	許智能 醫師	許勝雄 理　事
10:30-10:45	點心時間		
10:45-11:30	Current Management of Atherogenic Dyslipidemia	田凱仁 醫師	吳造中 秘書長
11:30-12:15	The Role of Prescription Omega-3 in CKD Patients with Dyslipidemia	鄭本忠 醫師	吳造中 秘書長
12:15-13:30	午餐		
13:30-14:15	HTN Treatment Strategy Update: After the SPRINT Study	林宗憲 醫師	吳造中 秘書長
14:15-15:00	From Hypertension to Protection: Contribution to ARB	邱俊仁醫師	吳造中 秘書長
15:00-15:15	點心時間		
15:15-16:00	Confronting Complexity to Glycemic Control: Practical Strategies to Simplify Type 2 Diabetes Care	李美月 醫師	賴文德 理　事
16:00-16:45	Glycaemic Variability and Complications in Patients with Diabetes Mellitus	沈峰志 醫師	賴文德 理　事
16:45-17:15	Choosing Anti-diabetic Drugs in the Treatment of Type 2 Diabetes	賴史明 醫師	賴文德 理　事
17:15-17:30	**Closing Remarks**		賴文德 理　事

備註：

1. 本次研討會採預約報名方式，請先網站預約登記，敬備午餐，謝謝。
2. 預計申請學分：中華民國醫師公會全國聯合會 / 中華民國心臟學會 / 內科醫學會 / 台灣家庭醫學醫學會
   台灣腎臟醫學會台灣神經學學會/ 中華民國糖尿病學會 / 台灣老人暨老年醫學會
   中華民國重症醫學會

《最終節目表依大會公告爲準》

理事長的話

各位同好：

有鑑於心血管疾病為國人十大死因之第二位，而心血管疾病相關知識、診斷及治療之研究日新月異，推陳出新。本會之宗旨包括推動專業人員之繼續教育，實有必要針對近期發表之相關學術論述與爭議，舉辦心血管全人照護研討會，以釐清相關之觀念。

本會歷年來在台北、台中、高雄舉辦之相關研討會均得到相當大的迴響與佳評，因此本會均每半年舉辦一次，以孚知識進展之時效性與普及性。爰此，本會擬於2017年初，1月14-15日於台北-台大醫學院102講堂，1月22日於台中-榮民總醫院及2月19日高雄醫學大學附設中和紀念醫院，再次舉辦心血管疾病照護相關議題之整合性學術研討會，歡迎各位同好踴躍參加，共襄盛舉。

理事長 陳文鍾
秘書長 吳造中
敬邀

申請入會方式：

1. 歡迎線上【台灣血脂衛教協會 http://www.lipid.com.tw/】【醫療專業人員】-【註冊 - 報名完成。
2. 填寫下列報名表後撕下，研討會後交給櫃檯服務人員或填寫後傳真至：(02) 2321-7485。
3. 來電告知秘書處聯繫 (02)-2312-3456 分機 88560，並請提供：姓名、連絡電話、e-mail（或收件地址以便寄送邀請函）。

會員可享：

1. 協會【醫療專業人員】網站資料下載、閱覽專業新知。
2. 協會研討會活動日期、課程節目表通知及學分申請。（以 e-mail 通知為主，如需郵寄請提供收件地址）。
3. 協會網站不定期更新相關專業知識訊息。

****

姓　　名	
醫事編號 或 ID 後 4 碼 (必填)	
手機、電話	
E - M A I L	
收件地址	□□□□

（請務必正楷填寫，以避免無法辨識）**回傳專線：(02) 2321-7485**

簡　　歷

基本資料：

姓　　名：翁瑄甫（Shuen-Fu, Weng）
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學歷：

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2008/9 入學	國立臺灣大學健康政策與管理研究所碩士班就學中

現職：

2008/4-迄今	臺北醫學大學附設醫院內科部內分泌新陳代謝科主治醫師
2008/9-迄今	臺北醫學大學附設醫院糖尿病工作小組組員
2008/9-迄今	臺北醫學大學附設醫院藥事委員會－藥品不良反應工作小組組員
2010/8-迄今	臺北醫學大學附設醫院教學研究部教學副主任
2010/8-迄今	臺北醫學大學附設醫院教育訓練委員會委員
2010/9-迄今	臺北醫學大學附設醫院病歷管理委員會委員
2011/1-迄今	臺北醫學大學附設醫院病歷審查小組組員暨組長
2008/8-迄今	臺北醫學大學醫學系內科學科兼任講師
2010/11-迄今	臺北醫學大學醫學院教師發展中心副主任
2005/7-迄今	臺大醫院內科部兼任主治醫師

經歷：

2000/7-2003/6	亞東醫院內科部住院醫師（全程於臺大醫院訓練）
2003/7-2005/6	臺大醫院內科部住院醫師
2003/7-2005/6	臺大醫院內科部內分泌新陳代謝科臨床研究員
2005/7-2008/3	敏盛綜合醫院內科部內分泌新陳代謝科主治醫師
2006/1-2007/8	敏盛綜合醫院病人安全委員會委員
2006/9-2008/2	敏盛綜合醫院內科部副主任
2007/8-2007/12	敏盛綜合醫院病人安全委員會召集人
2007/9-2008/1	敏盛綜合醫院肝炎中心代主任
2007/11-2008/3	敏盛綜合醫院人事評議委員會委員
2008/4-2009/12	臺北醫學大學附設醫院一般醫學科主治醫師
2008/9-2010/8	臺北醫學大學附設醫院藥事委員會－藥物治療評估小組組員
2008/9-2010/7	臺北醫學大學附設醫院醫療品質部副主任
2008/9-2010/8	臺北醫學大學附設醫院急診品質暨急救作業管理委員會委員
2009/9-2010/8	臺北醫學大學附設醫院員工福利委員會委員暨主任委員
2009/9-2010/8	臺北醫學大學附設醫院健康促進推動委員會委員
2010/9-2011/8	臺北醫學大學附設醫院研究發展委員會委員

專業證書：

1999/10 核發	醫師證書（醫字 030465 號）
2004/1 核發	內科專科醫師證書（內專醫字 6709 號）
2005/9 核發	內分泌暨新陳代謝科專科醫師證書（中內糖專醫字 432 號）
2006/8 核發	合格糖尿病衛教人員（糖衛證字號 2971 號）

Confronting Complexity to Glycemic Control: Practical Strategies to Simplify Type 2 Diabetes Care

翁瑄甫

Type 2 diabetes mellitus is a world-wide chronic disease across various regions and different races. Acute complications, including hypoglycemia, ketoacidosis, or chronic complications, including cardiovascular diseases, chronic kidney disease, retinopathy, and neuropathy, are closely related with glycemic control and regular investigations. Amongst, oral or injection therapy was also mentioned with their efficacy or adverse effects during the period of therapeutic intervention for type 2 diabetic patients. In the viewpoint of UKPDS study and DPP study, biguanide (metformin) was suggested to be the very first line medication for two decades, due to its preventive role of cardiovascular episodes. Thereafter, which oral or injection therapy could be the best partner with metformin was discussed in the past ten years? Generally, it depends on different phenotypic manifestation for type 2 diabetic patients. Acarbose was suggested to be the first line anti-diabetic agent in China, together with metformin, via MARCH study. Sulfonylurea and insulin often are considered for their efficacy and lower price; Glitazone is considered for its role in insulin sensitization; DPP-4 inhibitors, incretin therapies, GLP-1 injected agonists, will be suggested for its safety to prevent body weight gain and hypoglycemia. With more and more hyperglycemic treatment, choosing a simple treatment with proven efficacy, well safety and convenience, given the complex diabetes care for our patients is critical and essential.

CURRICULUM VITAE

PERSONAL DATA:

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EDUCATION:

1996-2004 Chang Gung University

EMPLOYMENT RECORD:

2004.08 -2007.07 Resident, Department of Internal Medicine, Chang Gung Memorial Hospital, Linkou

2007.08-2009.07 Clinical Fellow, Divison of Metabolism and Endocrinology, Department of Internal Medicine, Chang Gung Memorial Hospital, Linkou

2009.08-Present Attending physician, Divison of Metabolism and Endocrinology, Department of Internal Medicine, Chang Gung Memorial Hospital, Linkou

BOARD CERTIFICATION:

2005 Board of Medicine, R.O.C., No.:038056
2007 Board of Internal Medicine: No:7784
2009 Board of Endocrinology & Metabolism: No:530
Licensers: Certificate of medical doctor, Taiwan: NO. 038056

PROFESSIONAL AFFILIATIONS:

The Formosan Medical Association
Taiwan Society of Internal Medicine
The Diabetes Association of the Republic of China (Taiwan)
The Endocrine Society of the Republic of China (Taiwan)

RESEARCH INTEREST:

Clinical trial for diabetes

HONORS AND AWARDS:

2013 國民健康署 糖尿病醫療品質卓越獎 與進步獎
2014 國民健康署 糖尿病醫療品質卓越獎
2015 國民健康署 糖尿病醫療品質卓越獎
長庚優秀論文獎
2016 國民健康署 糖尿病醫療品質卓越獎

SGLT2 Inhibitor- Paradigm Shift in Diabetes Management

探討糖尿病治療新選擇

蔡松昇

糖尿病會有許多併發症，尤其是發生心肌梗塞及中風機率致死率要高出一般人！

從UKPDS研究證實積極的血糖控制，長期追蹤(>10年) 是有心血管風險減少好處.

Metformin自UPKDS試驗後，建立了糖尿病藥物治療第一線地位，ADA Guideline建議SU/TZD/DPP4…等其他類藥物可第二線使用，然而現有的幾種藥物，會有低血糖，體重增加等副作用，因此減少了病人服藥順從性。

2015年EMPA-REG證實SGLT2i可減少糖尿病心血管風險減少好處，相較於目前常用DPP4i除了血糖控制外，還有更多優點，但是使用上多一些限制與考量 (腎功能)以及副作用部份需要注意。此外，SGLT2i的機轉是甚麼?導致有心臟血管方面好處? 將進一步分析探討，讓臨床醫師在糖尿糖用藥時，能夠將心血管疾病風險同時納入考量，提供更全方位之治療策略。

簡　　歷

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現任台灣肥胖醫學會出版委員會主委
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中華民國糖尿病衛教學會監事

獲獎事蹟：
內分泌學會首獎－陳芳武優秀論文獎
東引地區好人好事代表
行政院國家科學委員會乙等獎助
內分泌學會－默沙東優秀論文獎
內分泌學會－諾和諾德糖尿病傑出研究獎
商業周刊列名百大名醫

New Insights on the Use of Acarbose for Management T2DM

石光中

It is well acknowledged that T2DM requires a multi-dimensional approach to control the disease and improve patient outcomes. However, as lifestyle can contribute to the development of diabetes, appropriate implementation of healthy life style is always the first step in managing the patient by promoting good eating habits, encouraging weight loss and increasing the amount of physical activity. Diabetes, with its long-term complications and comorbid conditions associated with it, is a major health hazard. The goal of treatment of diabetes is the prevention of onset and progression of complications. Therapeutic intervention to achieve this goal consists mainly of maintaining good glycemic control. Alpha-glucosidase inhibitors (AGIs) are widely used especially in Asian countries as a treatment option for type 2 diabetes (T2DM) patients with high postprandial glycaemia (PPG). In addition, acarbose has been shown to reduce cardiovascular complications in type 2 diabetes and prevent hypertension and CVD in individuals with impaired glucose tolerance (IGT). Acarbose has a very good safety profile and, owing to its straightforward, non-systemic mode of action, avoids most adverse events. The benefits of acarbose are likely mimicked by diets featuring slowly-digested 'lente' carbohydrate, and by certain nutraceuticals which can slow carbohydrate absorption. Prebiotics that promote colonic generation of short-chain fatty acids represent an alternative strategy for boosting intestinal GLP-1 production.

簡　　歷

基本資料：
姓名：賴史明
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主治專長：
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學歷：
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考試院高等考試優等及格 (1983年)

經歷：
台大醫院內科住院醫師 (1985~1988)
台大醫院內分泌新陳代謝科總住院醫師 (1988~1990)
台大醫院內科兼任主治醫師 (1990~2000)
羅東博愛醫院新陳代謝科暨實驗診斷科主任 (1990~1992)
新光吳火獅紀念醫院內分泌糖尿病科主任 (1992~2005)
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行政院衛生福利部全民健康保險爭議審議委員會醫療審查醫師 (1999~)
中華民國內科專科醫師甄審資格審查小組委員

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中華民國內分泌新陳代謝科專科醫師

榮譽事蹟：
(一) 兩度獲選為新光醫院內科部教學演講最佳講員
(二) 審訂譯作：
1. 糖尿病預防與治療(輕舟出版社)
2. 糖尿病Q&A (世茂出版社)
3. 血糖完全控制的最新療法 (新自然主義/幸福綠光股份有限公司)
4. 三酸甘油酯完全控制的最新療法 (新自然主義/幸福綠光股份有限公司)

Choosing Anti-diabetic Drugs in the Treatment of Type 2 Diabetes

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新光醫院 內分泌新陳代謝科

It is recognized that the pathophysiologic defects in type 2 diabetes include insulin resistance in muscle and liver, β-cell failure, accelerated lipolysis, hyperglucagonemia, incretin deficiency / resistance, increased renal reabsorption of glucose, and insulin resistance in brain.

Although many anti-diabetic agents with different mechanism are available to treat type 2 diabetes, no single agent can correct all the pathophysiologic defects. Multiple drugs used in combination will be required to correct the multiple pathophysiologic abnormalities.

Our choice of specific anti-hyperglycemic agents is predicated on their effectiveness in lowering glucose, safety profiles, tolerability, ease of use, and expense. According to the consensus statement of the ADA and the EASD, metformin should be initiated concurrently with lifestyle intervention as the first step in treating new onset type 2 diabetes, for its effect on glycemia, absence of weight gain or hypoglycemia, and relatively low cost.

The consensus regarding the second medication added to metformin was to choose sulfonylureas, TZDs, DPP-4 inhibitors, SGLT-2 inhibitors, GLP-1 RAs or insulin. With consideration given to the convenience to use, the good effectiveness, and the relative low cost, sulfonylureas are better than other anti-hyperglycemic agents to add on to metformin when metformin monotherapy fails to achieve glycemic goals.

Fixed-dose combination of oral antidiabetic drugs has higher adherence rates in patients and relatively lower cost than those of free combination. The fixed-dose combination of glimepiride and metformin is a good choice for diabetic patients with poor drug compliance to improve their glycemic control.

CURRICULUM VITAE

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EDUCATION:

1978-1985	M.D., College of Medicine, National Taiwan University, Taipei, Taiwan
1991.1995	Ph.D. (Clinical Medicine), College of Medicine, National Taiwan University, Taipei, Taiwan
1995-1996	Visiting Research Associate in Biomedical Engineering, Johns Hopkins University, Baltimore, USA

PROFESSIONAL SPECIALTY:

Cardiology, Vascular and Cellular Biology, Dyslipidemia, Cardiovascular Image, Biomagnetism, Nanotechnology

HOSPITAL APPOINTMENTS:

1984.1985	Intern (Medicine), National Taiwan University Hospital, Taipei, Taiwan
1987-1992	Resident (Internal Medicine), National Taiwan University Hospital, Taipei, Taiwan
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1994/02-1995/02	Director, Coronary Care Unit, National Taiwan University Hospital, Taipei, Taiwan
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2002,08-2005/06	Vice-Chairman, Department of General Medicine, National Taiwan University Hospital-Kong-Kuan, Taipei, Taiwan
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ACADEMIC APPOINTMENTS:

1990-1992	Research Fellow in Cardiology, National Taiwan University Hospital, Taipei, Taiwan
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1998-2003	Assistant Professor in Primary Care Medicine and Internal Medicine, National Taiwan University, Taipei, Taiwan
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2009-	Professor in Primary Care Medicine and Internal Medicine, National Taiwan University, Taipei, Taiwan

BOARD CERTIFICATION:

October, 1990	Chinese Board of Internal Medicine
October, 1992	Chinese Board of Cardiology

臺灣三高冠心照護的現況與未來

吳造中
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根據衛生福利部統計資料顯示，2012年十大主要死因中，心臟疾病、腦血管疾病、糖尿病、高血壓性疾病共造成42,449人死亡，佔總死亡人數約28%，且心臟病死亡率近年來有不降反升的趨勢，已嚴重威脅國人的健康。若民眾罹病就醫能在醫療機構獲得良好的三高控制、戒菸、飲食、運動及遵循醫囑用藥等追蹤控制措施，可有效減少病患後續心血管疾病惡化或再發風險之次級預防效益。有鑑於此，臺灣血脂 教協會配合國健署透過此類大規模研究計畫及管理方式辦理「三高救心全人健康管理試辦方案」，以協會為管理中心，並進行公開招募及輔導醫療院所參與本計畫、醫療院所申請資料審查及問題諮詢、病患追蹤情形及關鍵指標管考、醫療院所運作經費計算、給付。依國健署業務需要，執行相關工作、建置及維護全人健康管理服務系統及資料庫，及推動三高救心全人健康管理人員之再教育及認証等各項工作。藉由此計畫之執行來開發適合國人冠心三高控制之有效醫療模式，以提供未來標準作業模式之參考。

本計劃目前已納入之醫院包括台大、北榮、亞東、和平、林口長庚、高醫及義大。在取得收案病人同意書後，依照病人情況由個案管理師轉介至相關部門或直接進行衛教。且除了接受常規之臨床照護外，將進行至少五年之個案管理及追蹤。按照過往研究：利用居家血壓監控，可提高受照護病人血壓控制之達標率及收集有效正確之血壓數據，為三高控制之重要環節。各參與醫院及本協會研議後均認為居家血壓監控應納入國人三高救心全人健康管理之醫療模式，而居家照護服務可包含監測居家血壓情形及提供藥品配送及諮詢等。納入居家照護服務的個案，會教導病人居家測量血壓的方式及注意事項，每個月應至少測量七天居家血壓，並且登錄於血壓記錄本中; 家訪員於每月家訪時除了提供藥品配送及諮詢外，並須記錄其居家血壓值及藥品剩餘數量。收集之個案必須完成基本之資料及生活型態評估表(項目包含：飲食、吸菸、腰圍、身體質量指數、嚼檳榔、運動等健康行為評估)，及其後定期(每6個月)依管理品質評估對病人照護進行品質評估及完成三高救心全人健康管理報告表。

本計劃期許透過個案管理衛教、居家照護、品質指標之建立與監測，能提高三高冠心病人自我健康管理及三高控制之達成率，並有效預防或減緩心臟病、中風等慢性病人之併發症、失能及死亡率。

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心律不整電燒手術
心律調節器及體內去顫器植入

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過去成果：
蔡醫師專精於一般內科、心臟內科、冠狀動脈心臟病、心律不整等各種心臟病，且精通冠狀動脈心導管手術及支架植入、心律不整電燒手術、心律調節器及體內去顫器植入等各種心臟病相關手術。在醫學研究方面，蔡醫師發表研究結果於眾多國內外知名期刊，且曾獲得中華民國心臟學會青年醫師研究獎、中華民國心臟學會最高榮譽國內學人丁農獎、台大醫院傑出研究獎、台大醫學院傑出著作獎、青杏醫學獎、國科會吳大猷獎及國科會最高榮譽傑出研究獎。

Taiwan AF Guideline: The Clinical Practice for SPAF

蔡佳醍
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1. Abnormal changes shown in the vessel wall (eg, atrial tissue changes, endothelial damage and dysfunction), in flow (stasis—eg, in the left atrial appendage), and in blood constituents (eg, haemoconcentration, platelets, coagulation cascade activation, inflammation); all factors contribute to propensity for thrombus formation (thrombogenesis) in atrial fibrillation. Studies in Asian countries have shown that Asian patients with AF have a five- to eight-fold higher risk of stroke compared with patients without AF. The presence of AF is associated with higher long-term risk of stroke, heart failure, and all-cause mortality.

2. In ENGAGE AF-TIMI 48 study, the dose adjustment and elderly population with edoxaban had similar favorable outcomes with study population. In subgroup analysis, there were no significant differences between warfarin and either dose regimen of edoxaban in rates of fatal and major GI bleeding in East Asian patients.

3. The primary goals of AF treatment are relief of symptoms, reduction of CVD risks and mortality, and prevention of thromboembolism event.

4. Traditional oral anticoagulant had showed more effective than antiplatelet agents in the prevention of AF related stroke, however unpredictable response, narrow therapeutic window, and numerous drug-drug & food-drug interactions limit its widespread use.

5. Optimal NOACs selection requires consideration of patient characteristics and differences among the agents. Once-daily higher dose edoxaban (60/30 mg) was non-inferior to well managed warfarin for reduction in stroke and systemic embolism and significantly reduced major bleeding and intracranial hemorrhage, also associated with superior net clinical benefit.

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2014.08-now-	Chief, Department of Cardiology, Shin Kong Wu Ho-Su Memorial Hospital, Taipei, Taiwan
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2012.01-2014.01	Associate Secretary-General of Taiwain Society of Cardiovascular Intervention (TSCI)
2010.07-2012.05	Associate Secretary-General of Taiwain Society of Cardiology (TSOC)
2009.08-2011.07	Chief, Division of Cardiology, School of Medicine, Fu-Jen University, New Taipei City, Taiwan
2011.08-now	Assistant Professor, Division of Cardiology, School of Medicine, Fu-Jen University, New Taipei City, Taiwan
2001.07-now	Attending Physician, Department of Cardiology, Shin Kong Wu Ho-Su Memorial Hospital
2005.08-2011.07	Lecture, School of Medicine, Catholic Fu-Jen University
2001.07-2001.09	Cardiology Fellow, National Cardiovascular Center, Japan
2001.10-2002.06	Cardiology Fellow, Kurashiki Central Hospital, Japan
1998.07-2000.06	Chief resident, Department of Cardiology, SKH
1995.07-1998.06	Resident, Department of Internal Medicine, National Taiwan University Hospital

CLINICAL SPECIALITY:

Interventional Cardiology of Coronary Artery Disease
Echocardiopgraphy
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AWARD:

Best paper award of Acta Cardiologica Sinica in 2013
First prize of Young Investigator Award of Taiwan Society of Cardiology in 2009
Best paper award of Journal of Taiwan Society of Nuclear Medicine in 2008
Poster award in annual scientific meeting of Taiwan Society of Cardiology in 2014
Best paper award of Journal of Society of Medical Ultrasound in 2003
Paper awards of Shin Kong Wu Ho-Su Memorial Hospital in 2009, 2011, 2013
Lecture in Teaching Excellence Award of Catholic Fu-Jen University in 2014

From Hypertension to Protection: Contribution to ARB

新光醫院心臟內科主任 邱俊仁 醫師

Chiung-Zuan Chiu, MD, PhD, FACC
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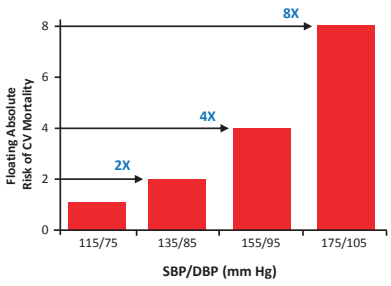
Hypertension and Cardiovascular Outcomes

- Hypertension is extremely common worldwide
- Epidemiologic studies have shown that elevations in BP are associated with an increased risk of CV events
  - Absolute risk increases progressively (geometrically) with increasing BP
- Lowering blood pressure reduces the risk of fatal and nonfatal CV events, primarily strokes and myocardial infarctions
- Control of high BP should be part of comprehensive CV risk management, including, as appropriate, lipid control, diabetes management, antithrombotic therapy, smoking cessation, exercise and limited sodium intake

Risk of CV death is estimated to double with each 20/10 mmHg increase in BP*

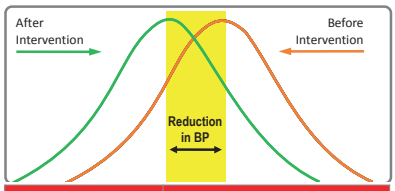


Study Design: A meta-analysis of 1 million adults from 61 prospective observational studies of blood pressure and mortality was performed.[2] Total observational period included 12.7 million person-years. Patients had no previous vascular disease recorded at baseline. Outcomes included 56,000 vascular deaths and 66,000 other deaths at ages 40 to 89 years.[2]

*Individuals aged 40-69 years, starting at BP 115/75 mm Hg
CV= cardiovascular

Adapted from: 1. Chobanian AV, et al. *JAMA*. 2003;289:2560-2572; 2. Lewington S, et al. *Lancet*. 2002;360:1903-1913.

Modest* improvements in SBP reduction may lower CV risk



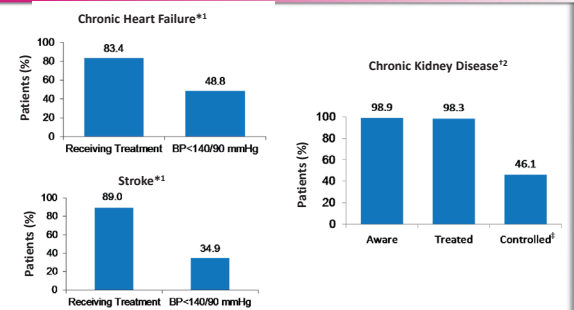
Reduction in SBP (mm Hg)	% Reduction in Mortality†	
	Stroke	Coronary Heart Disease
2	-6	-4
3	-8	-5
5	-14	-9

Study Design: SBP and mortality was analyzed in 5 large population follow-up studies, the Multiple Risk Factor Intervention Trial, the Whitehall Civil Servants study, the Western Electric study, the Framingham Heart study, and the Chicago Heart Association Detection Project in Industry. Follow-up lasted from 6 to 19 years and the multivariate coefficients for the 5 studies were similar and averaged.[2]

*Modest is defined as a decrease in SBP of 2-5 mm Hg.
† Population estimation.

1. Adapted from Chobanian AV, et al. *Hypertension*. 2003;42:1206-1252; 2. Stamler R. *Hypertension*. 1991;17(supp 1):I-16-I-20.

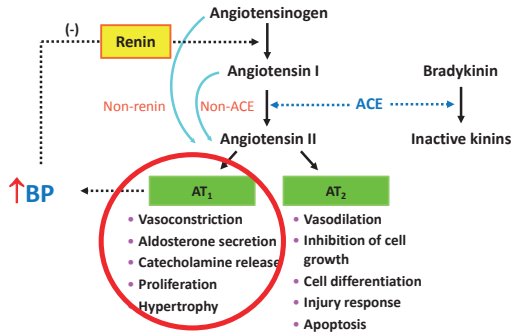
Control of Hypertension in Patients with Comorbidities



*Patients ≥ 18 years old in the National Health and Nutrition Examination Survey (NHANES) 2003–2004
† Data from the chronic renal insufficiency cohort
‡ BP< 130/80 mmHg

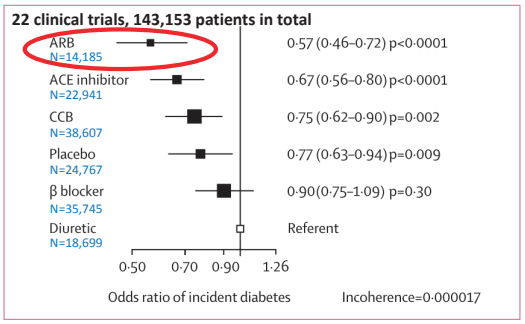
1. Wong ND, et al. *Arch Intern Med*. 2007;167:2431–2436.
2. Muntner P, et al. *Am J Kidney Dis*. 2010;55:441-451.

Renin-Angiotensin System



Ellis ML et al. *Pharmacotherapy*. 1996;16:849-860.
Carey RM et al. *Hypertension*. 2000;35:155-163.

Network Meta-analysis of Antihypertensive Drugs on New Diabetes



Individual pair-wise comparisons between diuretic vs. β blocker (p=0.30), placebo vs. CCB (p=0.72), ACE inhibitor vs. ARB (p=0.16) did not achieve significance (p<0.05)

Elliott W.J. et al. Lancet. 2007;369:201-7

How MAU may contribute to the pathogenesis of CVD?

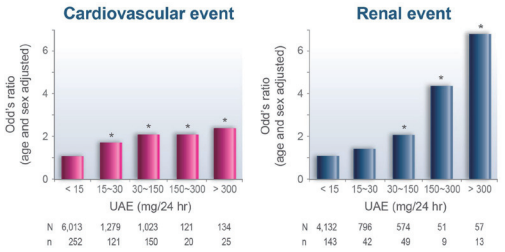
√ The currently proposed mechanisms mainly involve local injury to the vascular smooth muscle cells and endothelial cells in the vasculature leading to cell proliferation and increases in vascular permeability.

Pathophysiological processes associated with MAU
Local process
• Increased intraglomerular capillary pressure • Increased shunting of albumin through glomerular membrane pores
Systemic process
• Activation of inflammatory mediators • Increased transcapillary escape rate of albumin • Vascular endothelial dysfunction

Reference: Garg JP, Bakris GL. Microalbuminuria: marker of vascular dysfunction, risk factor for cardiovascular disease. Vasc Med 2002;7:35-43.

MAU is a strong predictor of renal and cardiovascular events in general population

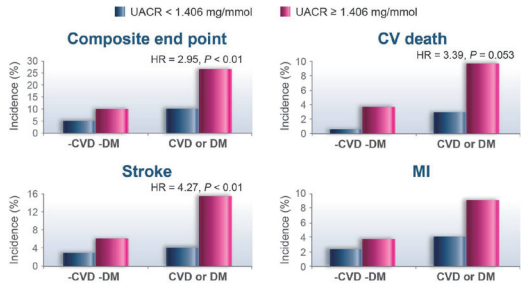
Age- and gender-adjusted risk to develop cardiovascular and renal event in the PREVEND cohort



*p < 0.05 versus patients with a urinary albumin excretion < 15 mg/d. N = the number of patients with follow-up data available; n = the number of patients with an event.

Reference: Gansevoort RT, de Jong PE. The case for using albuminuria in staging chronic kidney disease. J Am Soc Nephrol 2009;20:465-8.

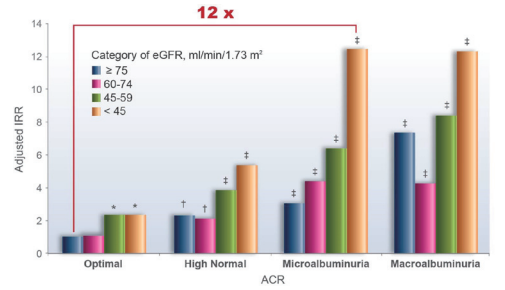
Albuminuria predicts CV events in patients with or without CV disease or diabetes



As part of the LIFE trial, an echocardiographic substudy enrolled 960 participants. Patients aged 55–80 years with mean seated blood pressures in the range 160–200 mmHg systolic and/or 95–115mmHg diastolic after 1 and 2 weeks on placebo treatment.

Reference: Olsen MH, et al. Albuminuria predicts cardiovascular events independently of left ventricular mass in hypertension: a LIFE substudy. J Hum Hypertens 2004;18:453-9.

Reduced kidney function and MAU are risk factors for cardiovascular death



The HUNT II study is a large-scale Norwegian general health survey. From 1995 to 1997, every individual residing in the county who was at least 20 years old (n=92,939) was invited to participate. The eGFR was estimated from calibrated serum creatinine, and the urine ACR was measured in 3 urine samples in 9709 participants of the HUNT II study followed for 8.3 years with a 71% participation rate.

Reference: Hallan S, et al. Association of kidney function and albuminuria with cardiovascular mortality in older vs younger individuals: The HUNT II Study. Arch Intern Med 2007;167:2490-6.

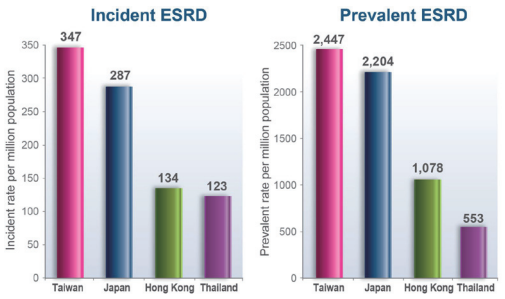
ESH/ESC guideline recommendation: tests for MAU are widely available and relatively inexpensive and highly predictive

Availability, prognostic value and cost of some markers of organ damage (scored from 0 to 4 pluses)

Markers	CV predictive value	Availability	Cost
Electrocardiography	++	++++	+
Echocardiography	+++	+++	++
Carotid intima-media thickness	+++	+++	++
Arterial stiffness (pulse wave velocity)	+++	+	++
Ankle-Brachial index	++	++	+
Coronary calcium content	+	+	++++
Cardiac/vascular tissue composition	?	+	++
Circulatory collagen markers	?	+	++
Endothelial dysfunction	++	+	+++
Cerebral lacunae/white matter lesions	?	++	++++
Est. glomerular filtration rate or creatinine clearance	+++	++++	+
Microalbuminuria	+++	++++	+

Reference: Mancia G, et al. 2007 Guidelines for the management of arterial hypertension: The Task Force for the Management of Arterial Hypertension of the European Society of Hypertension (ESH) and of the European Society of Cardiology (ESC). Eur Heart J 2007;28:1462-536.

Taiwan has the highest incidence and prevalence rate of ESRD in Asia

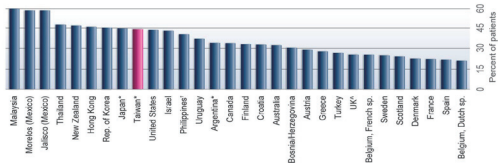


Reference: International comparisons. In: United Stated Renal Data System 2011 USRDS Annual Data Report. Volume two. Atlas of end-stage renal disease in the United States. p291-302.

Diabetes is the leading cause of ESRD in Taiwan

- Diabetes was the primary cause of ESRD in 40% of new patients in Taiwan.

Percentage of incident patients with ESRD due to diabetes, 2009



Data presented only for countries from which relevant information was available. All rates unadjusted. ^UK: England, Wales, & Northern Ireland (Scotland data reported separately). Data for Belgium & England/Wales/Northern Ireland do not include patients younger than 20 & 18, respectively. *Argentina (2005–2007, 2009), Bangladesh, Brazil, Czech Republic (2005–2008), Japan, Luxembourg, & Taiwan are dialysis only. †Latest data for the Philippines and Poland are for 2008. Data for France include 13 regions in 2005, 15 regions in 2006, 18 regions in 2007, & 20 regions in 2008 & 2009.

Reference: International comparisons. In: United Stated Renal Data System 2011 USRDS Annual Data Report. Volume two. Atlas of end-stage renal disease in the United States. p291-302.

Patients with type 2 diabetic nephropathy are more likely to reach ESRD and die during 3 years' mean follow-up

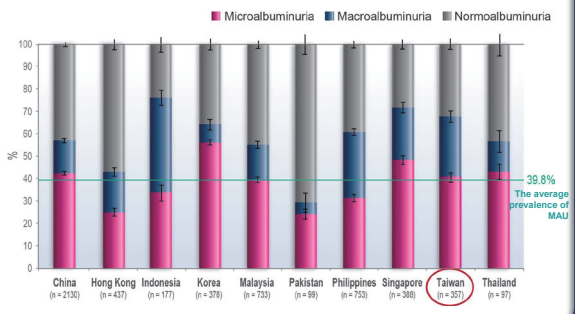
- ✓ Diabetic nephropathy occurs in 20 ~ 40% of patients with diabetes and is the single leading cause of ESRD. [1]
- ✓ For patients with type 2 diabetic nephropathy, 19.5% of patients developed ESRD, approximately 2.5 times the incidence of CV death and 1.5 times the incidence of all-cause mortality. [2]

Incidence rate ratios for ESRD vs CV death or all-cause mortality		
	IRR (95% CI)	*p*
ESRD / CV death	2.42 (2.09-2.79)	< 0.001
ESRD / All-cause mortality	1.55 (1.36-1.74)	< 0.001

3,228 adult patients with type 2 diabetic nephropathy from IDNT and RENAAL were combined to establish the DIAMETRIC database. Outcomes of interest for the present analysis were ESRD and cardiovascular death. These patients had been followed up for a mean of 2.8 years, and assigned to ARB (n=1331) or non-ARB (n=1898) treatment.

References: 1. American Diabetes Association. Standards of medical care in diabetes—2012. Diabetes Care 2012;35(suppl 1):S11-S63; **2.** Packham DK, et al. Relative incidence of ESRD versus cardiovascular mortality in proteinuric type 2 diabetes and nephropathy: results from the DIAMETRIC (Diabetes Mellitus Treatment for Renal Insufficiency Consortium) database. Am J Kidney Dis 2012;59:75-83.

MAU is highly prevalent in Asian T2DM patients



Reference: Wu AY, et al. An alarmingly high prevalence of diabetic nephropathy in Asian type 2 diabetic patients: the MicroAlbuminuria Prevalence (MAP) Study. Diabetologia 2005;48:17-26.

The earliest sign of diabetic nephropathy is the development of MAU

- ✓ MAU has been shown to be a marker for development of nephropathy in type 2 diabetes.[1]
- ✓ In type 2 diabetes with MAU, the prevalence of renal function decline (GFR loss > 3.3%/yr) was 42%.[2]
- ✓ Every 10-fold increment in baseline UACR, which corresponds approximately to a change from micro- to macroalbuminuria, was associated with 3.3-fold higher risk of renal events.[3]

References: 1. American Diabetes Association. Standards of medical care in diabetes—2012. Diabetes Care 2012;35(suppl 1):S11-S63; **2.** Pavkov ME, et al. Early renal function decline in type 2 diabetes. Clin J Am Soc Nephrol 2012;7:78-84; **3.** Ninomiya T, et al. Albuminuria and kidney function independently predict cardiovascular and renal outcomes in diabetes. J Am Soc Nephrol 2009;20:1813-21.

Association of albuminuria level or GFR at baseline with the risk for renal event

- ✓ Every halving of baseline eGFR was associated with 8.35-fold higher risk of renal events.[1]
- ✓ 80% of diabetics with a eGFR < 30 ml/min/1.73 m^2 demonstrated albuminuria.[2]

Prevalence of albuminuria by strata of renal insufficiency in diabetic population[2]			
eGFR (ml/min/1.73 m^2)	Microalbuminuria	Macroalbuminuria	Albuminuria
< 30	36.2%	44.2%	80.4%
30 ~ 60	42.6%	8.1%	50.7%
> 60	25.5%	4.3%	29.8%

References: 1. Ninomiya T, et al. Albuminuria and kidney function independently predict cardiovascular and renal outcomes in diabetes. J Am Soc Nephrol 2009;20:1813-21; **2.** Garg AX, et al. Albuminuria and renal insufficiency prevalence guides population screening: Results from the NHANES III. Kidney Int 2002;61:2165-75.

簡　　歷

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HTN Treatment Strategy Update: After the SPRINT Study

陳冠群
振興醫院

1. There are 25 leading risk factors in 1990 and 2010. High blood pressure is the rank 1 Risk factors. Years of life lost and years lived with disability were measured in units of healthy life lost. In Taiwan, high blood pressure disease is the number 8 of leading cause of death. However, it become the number 1 of leading cause of death when all correlated with high blood pressure.
2. The ARBs' mechanism of action, selective inhibition of angiotensin II by competitive antagonism of the angiotensin II receptors, has been speculated to reduce adverse effects and possibly improve clinical efficacy. ARBs displace angiotensin II from the angiotensin I receptor and produce their blood pressure lowering effects by antagonizing angiotensin II–induced vasoconstriction, aldosterone release, catecholamine release, arginine vasopressin release, water intake, and hypertrophic response
3. ARBs have the following actions: dilate arteries and veins and thereby reduce arterial pressure and preload and afterload on the heart, down regulate sympathetic adrenergic activity by blocking the effects of angiotensin II on sympathetic nerve release and reuptake of norepinephrine, promote renal excretion of sodium and water by blocking the effects of angiotensin II in the kidney and by blocking angiotensin II stimulation of aldosterone secretion, inhibit cardiac and vascular remodeling associated with chronic hypertension, heart failure, and myocardial infarction.
4. Perhaps most striking is the practical implications of data: even a small, 2 mm Hg fall in mean systolic BP would be associated with large absolute reductions in premature deaths and disabling strokes. A 2 mm Hg lower mean systolic BP could lead to a 7% lower risk of IHD death and a 10% lower risk of stroke death.
5. In a meta-analysis of 61 prospective, observational studies conducted with no previous vascular disease at baseline, the researchers found that between the ages of 40-69 years, each incremental rise of 20 mm Hg systolic BP and 10 mm Hg diastolic BP was associated with a twofold increase in death rates from ischemic heart disease and other vascular disease.
6. The SPRINT trial showed patients at high risk for cardiovascular events but without diabetes, targeting a systolic blood pressure of less than 120 mm Hg, as compared with less than 140 mm Hg, resulted in lower rates of fatal and nonfatal major cardiovascular events and death from any cause, although significantly higher rates of some adverse events were observed in the intensive-treatment group.
7. Although those guidelines provide evidence-based recommendations for the management of high BP, guideline recommendations are not a substitute for clinical judgment, and decisions about care must carefully consider and incorporate the clinical characteristics and circumstances of each individual patient.
8. Single-pill combination of two drugs does not only improve medication compliance, but also reduce risks of cardiovascular diseases and healthcare cost.

簡　　歷

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2008/09-2010/01　國立台灣大學公共衛生碩士(M. P. H.)
2016/09-　國立台灣大學醫學院藥理所博士班

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經歷：

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2013/02-2013/07　台大醫學院家庭醫學科兼任講師
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2005/07-2008/06　台大醫院家庭醫學部住院醫師

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學會：

中華民國醫用超音波學會、台灣家庭醫學醫學會、台灣肥胖醫學會、台灣安寧緩和醫學會、臺灣醫學會、台灣家庭醫學教育研究學會

特殊訓練：

糖尿病與初期慢性腎臟病共同照顧網認證醫師、一般醫學訓練社區醫學導師、中華民國合氣道協會理事、口腔黏膜檢查合格醫師、職業醫學健檢合格醫師、戒菸治療專門醫師/種子教師、高級心臟救命術合格醫師、醫師國考高偕OSCE 考官。

診療專長：

高血壓、糖尿病、高血脂、初期慢性腎病、家庭醫學、預防醫學、癌症篩檢、安寧緩和醫學、公共衛生、肝病保健、腹部超音波、門診戒菸、運動處方、肥胖減重與社區及一般門診常見疾病。

研究領域：

慢性肝病及腫瘤與代謝肥胖因子之預防醫學系列研究、戒菸在糖尿病預防之世代研究、社區健康評估與溝通之專題醫學教育等。

Statin Role Beyond Lipid Care

江建勰
臺大醫院

1. Tailored treatment is a simpler, safer, more effective, more evidence-based approach. The safety of treating to LDL targets has never been proven.

2. In LIPID, the absolute survival benefit from 6 years pravastatin treatment appeared to be maintained for the next 10 years, with a similar risk of death among survivors in both groups after the initial period. Treatment with statins does not influence cancer or death from noncardiovascular causes during long-term follow-up.

3. While statins are generally well tolerated, about 10% 15% of patients will experience statin myopathy. This is the most common cause of statin discontinuation. This adverse event varies from mild myalgia and others to fulminant rhabdomyolysis. Currently the etiology of statin myopathy is thought to be multifactorial with recent studies pointing to calcium signaling as playing a role. Some patient characteristics may make them at higher risk of statin myopathy. Coenzyme Q10 and Vitamin D have been used to prevent and treat statin myopathy but currently there is limited clinical trial evidence to support their use. Statin-intolerant patients may be successfully treated with either low dose statins, alternate daily dosing, twice-weekly dosing with longer half-life statins or the use of non-statin lipid-lowering drugs.

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1982-1989 M.D. Chung-Shan Medical University, Taiwan
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1996-2010 Department of Internal Medicine, National Taiwan University Hospital, Taiwan (Adjunct staff)
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2006-2010 Chief of Department of Internal Medicine, FEMH
2007-2008 Chief of Center of Faculty Development (CFD), FEMH
2008-2010 Chief, Clinical Trial Center (CTC), FEMH

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1995- Specialist, Endocrinology and Metabolism, The Endocrinology Society and Diabetes Association of the Republic of China

EXPERIENCE:

1995-1998 Secretary General, The Endocrinology Society of the Republic of China
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2007- Board of Directors, Endocrine Society, Taiwan
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2008- Editor, Journal of Medical Ultrasound (West Pacific)
2010- Vice-Executive, Diabetes Care Foundation, Taiwan

Statin Treatment and New-Onset Diabetes Mellitus

Chih-Yuan Wang

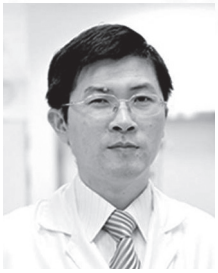
In major clinical endpoint trials, statins have been shown safe and effective. CARDS, PROVE-IT TIMI-22 and JUPITER trials demonstrated significant cardiovascular risk reduction by statins. In addition, these studies have suggested a negative effect of statin on glucose metabolism. Recent meta-analyses on large-scale trials have shown that statin treatment was associated with increase in the new onset of diabetes.

Statistics vary, but in general diabetic patients have a 2- to 4-fold greater risk for myocardial infarction (MI) or stroke than nondiabetics. The main lipid abnormalities in type 2 diabetes are a reduced HDL-C level and elevated triglycerides, leading to an increase in the total cholesterol/HDL-C ratio. Although LDL-C levels are on average no higher than in matched individuals without type 2 diabetes, the LDL-C is more likely to be oxidized as well as glycated. In addition, there is a preponderance of small dense LDL particles (so-called pattern B), and all of these changes contribute to a more atherogenic LDL-C particle. The Collaborative Atorvastatin Diabetes Study (CARDS) trial was the first statin study done exclusively in patients with diabetes. The results of this study revealed a 37% reduction in risk for cardiovascular events and 48% reduction in risk for stroke associated with the atorvastatin treatment. Based on recent evidence, Diabetes benefit the most from additional reduction in LDL, and therefore the new recommendation is to achieve an LDL goal of <70 mg/dL in this patient population.

With regard to pitavastatin, it has been reported that HbA1c significantly decreased from the baseline in diabetic patients with hypercholesterolemia during a 2-year follow-up in LIVES study. Moreover, there has been no confirmed signal of a diabetes risk for pitavastatin either in post-marketing safety surveillance studies or in prospective studies in Europe Revised package leaflet on March, 2016. And TFDA also follow EU PI to revised Livalo® (pitavastatin) PI in Taiwan this September.

Therefore, pitavastatin is characterized by (1) strong efficacy as atorvastatin, (2) safety-low incidence of hepatic enzyme changes, and (3) low drug-drug interaction because of the unique pathway of glucuronidation.

簡　　歷



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混合型高血脂症藥物治療的新觀念
New Perspectives on the Treatment of Mixed Dyslipidemia

謝敏雄
萬芳醫院心臟內科

冠狀動脈心臟病一直是國人最重要的疾病之一，而高血脂症則是冠狀動脈心臟病最重要的危險因子，因此使用statin來降低低密度膽固醇變成最重要的藥物治療。在有些statin治療仍未達標的患者，目前大型研究也證實加上ezetimibe有不錯臨床療效，另外在台灣仍在臨床試驗的針劑PCSK9抑制劑，效果相當顯著，同時再度證明低密度膽固醇愈低愈好的理論。不過即使有這些藥物，可以降低低密度膽固醇超過百分之五十以上，或者降低低密度膽固醇來到70 mg/dl以下，仍有許多人發生心肌梗塞，因此非低密度膽固醇的治療又開始受到重視，其中最受矚目當然是高密度膽固醇及三酸甘油脂的治療。提升高密度膽固醇目前市面上並沒有很有效的藥物，而一些大型臨床研究也尚未證實提升高密度膽固醇可以明顯降低心肌梗塞死亡率，而臨床試驗中的藥物CETP抑制劑，雖然可以提升高密度膽固醇至150%，但是有一些嚴重副作用使得此類藥物尚未上市。而降低三酸甘油脂的藥物則使用很久了，藥效也不錯，這其中包括fibrate類藥物及niacin。Fibrate及niacin都可以明顯降低三酸甘油脂及提升高密度膽固醇，但是在使用statin之下加上fibrate或niacin都無法明顯改善心肌梗塞死亡率，使得這兩類藥物在血脂異常治療指引中退居後線角色。不過在這些大型研究的次分析中發現當使用statin降低低密度膽固醇70 mg/dl以下，若是患者同時血中三酸甘油脂高及高密度膽固醇低，使用fibrate 或 niacin就可以明顯降低心血管事件發生率，顯示這兩類藥物在血脂異常治療上仍佔有一席之地。而我個人臨床經驗中發現使用降血脂藥物常有所謂”蹺蹺板”效應，也就是說使用statin會降低低密度膽固醇，卻反而會升高三酸甘油脂，同樣的使用fibrate無疑會降低三酸甘油脂，卻同時也會升高低密度膽固醇。這樣混和型高血脂症的患者約占三分之一，因此往往必須同時使用statin加上fibrate或niacin才能達到有效的血脂控制，這樣的合併治療個人經驗效果不錯，副作用主要還是肌肉痠痛，嚴重如橫紋肌溶解症或肝腎毒性都很少發生，當然如果單一顆藥物含有statin及niacin或fibrate，可以同時降低密度膽固醇及三酸甘油脂，又可以提升高密度膽固醇，相信病人的順從性會更好，才能達到最大的療效。

CURRICULUM VITAE

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MAJOR:

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Hypertension

TRAINING & EXPERIENCES:

Residentship, Internal Medicine, NTUH 1999-2004

Chief resident, Internal Medicine, NTUH 2002-2004

Research fellowship, Renal Division, NTUH

Staff physician, Yun-Lin Branch, NTUH, 2004-7

Staff physician, NTUH, 2006-7

Graduate institute of Clinical Medicine, NTU, PhD degree 2011- present

REVIEWER:

Am J of Kidney Disease	2007- awarded 3 category 1 credit(s) toward the AMA Physician's Recognition Award.
Nephrol Dial Transplant	2005-
AJCC	2008-
Journal Minerva Anestesiologica	2009, 2010-2011
International Journal of Gerontology	2010-
Surgical Endoscopy	2010-2011
Clinica Chimica Acta	2010- 2011
Nephrology	2011
Journal of Pediatric Endocrinology and Metabolism	2011
The Journal of Clinical Endocrinology & Metabolism	2011, 2 AMA PRA Category 1 Credits™.
Kidney international	2011

The Role of Prescription Omega-3 in CKD Patients with Dyslipidemia

吳允升

高三酸甘油脂血症是心血管疾病的獨立危險因子，特別是代謝症候群或慢性腎疾病的患者，其三酸甘油脂的控制更為重要。目前用來治療高三酸甘油脂的藥物有纖維酸鹽類和菸鹼酸鹽類藥物兩種，但對於慢性腎疾病患者，因隨腎功能需劑量調整或禁用，使用上多有不便。而國外已有Omega-3多元不飽和脂肪酸的處方藥，也可應用於高三酸甘油脂症的治療，且使用於腎病變患者不用調整劑量。Omega-3多元不飽和脂肪酸主要是包含兩類，eicosapentaenoic acid (EPA)和docosahexaenoic acid (DHA)，其降三酸甘油脂的效果和濃度高低有關。目前臨床實驗證明，如要達到一定的降三酸甘油脂效果，每天服用EPA/DHA含量要達到2g以上，而要達到最理想的效果，大約要達到每日3~4g，而每日1g其實也有降三酸甘油脂的效果，只是目前較少實驗數據佐證。Omega-3多元不飽和脂肪酸除了能降三酸甘油脂外，對於高密度脂蛋白的調升，和非高密度脂蛋白膽固醇的調降，也有臨床效果。對於單純型高三酸甘油脂血症，或混合行高血脂症的治療，及國人心血管疾病的預防，相信有一定裨益。

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姓名：柯欣榮

學歷：

1999　台大醫學院醫學系畢業
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經歷：

1999-2002　台大醫院內科住院醫師
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Improve the Cardiovascular Outcome: Advanced Consideration for Hyperlipidemia Management with Combination Therapy in High Risk Patients

柯欣榮

Over the decades, numerous statin landmark trials have demonstrated a linear correlation between LDL-C level and cardiovascular event rate. The Cholesterol Treatment Trialists' (CTT) Collaboration has further established the clear relationship between LDL-C reduction and relative risk reduction (RRR) in major vascular events. In 2014, a landmark study, IMPROVE-IT trial, investigating ezetimibe added to statin therapy to lower LDL-C to the level of 53 mg/dL. It shows that ezetimibe reduces cardiovascular events with consistent relative risk reduction with statins per unit LDL-C reduction. Also, it provides the most advanced evidence that lowering LDL-C from 70 mg/dL to 53 md/dL further reduces major vascular event rate by 7.2%, with no increase in adverse events. High risk CV patients are expected to have better LDL-C level control to reduce their cardiovascular risk efficiently. A recommendation for the prescription of high-intensity statins to be initiated for high risk patients, such as ACS patients to reach the LDL-C target, however the goal attainment rate is not satisfied. Although statins are widely prescribed for such patients, the intensity of therapy and the proportion of patients achieving target LDL-C values are often not in line with recommendations due to a lack of compliance with guidelines by the physicians, a lack of compliance with treatment or poor tolerance by patients, and poor dose adaptation. It is important to consider lipid lowering therapy to improve the compliance, reduce the AE and better reach the lower LDL-C target.

Currently, all other non-statin combination lipid lowering therapies (ex. Niacin, fibrate) have not shown CV benefit when it's combined with statin. Ezetimibe is the only non-statin agent to demonstrate the CV benefit when combined with statin. The results have been widely addressed in different major lipid treatment guideline, such as 2016 ADA guideline, 2016 ESC prevention guideline and 2016 ACC consensus. Ezetimibe is suggested as the first non-statin option for lipid lowering in these guidelines. Furthermore, the lipid treatment goal concept has been widely addressed in different international guideline. The IMPROVE-IT study not only reinforced the LDL hypothesis but also demonstrate the CV benefit of ezetimibe as non-statin therapy. It also gradually shapes the lipid treatment concept to have lower LDL-C target for high risk patients.

簡　　歷

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2. 台中榮民總醫院內科部住院醫師 (92/05-95/08)
3. 台中榮民總醫院內科部住院總醫師 (95/09-98/04)

獲獎事蹟：
99年台中榮民總醫院青年醫師住院醫師組優良論文

專科證書：
中華民國內科專科醫師
中華民國內分泌新陳代謝專科醫師
中華民國糖尿病衛教師

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中華民國內科學會
中華民國內分泌學會
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甲狀腺疾病
糖尿病

Statin Treatment and New-Onset Diabetes Mellitus

王俊興

In major clinical endpoint trials, statins have been shown safe and effective. CARDS, PROVE-IT TIMI-22 and JUPITER trials demonstrated significant cardiovascular risk reduction by statins. In addition, these studies have suggested a negative effect of statin on glucose metabolism. Recent meta-analyses on large-scale trials have shown that statin treatment was associated with increase in the new onset of diabetes.

Statistics vary, but in general diabetic patients have a 2- to 4-fold greater risk for myocardial infarction (MI) or stroke than nondiabetics. The main lipid abnormalities in type 2 diabetes are a reduced HDL-C level and elevated triglycerides, leading to an increase in the total cholesterol/HDL-C ratio. Although LDL-C levels are on average no higher than in matched individuals without type 2 diabetes, the LDL-C is more likely to be oxidized as well as glycated. In addition, there is a preponderance of small dense LDL particles (so-called pattern B), and all of these changes contribute to a more atherogenic LDL-C particle. The Collaborative Atorvastatin Diabetes Study (CARDS) trial was the first statin study done exclusively in patients with diabetes. The results of this study revealed a 37% reduction in risk for cardiovascular events and 48% reduction in risk for stroke associated with the atorvastatin treatment. Based on recent evidence, Diabetes benefit the most from additional reduction in LDL, and therefore the new recommendation is to achieve an LDL goal of <70 mg/dL in this patient population.

With regard to pitavastatin, it has been reported that HbA1c significantly decreased from the baseline in diabetic patients with hypercholesterolemia during a 2-year follow-up in LIVES study. Moreover, there has been no confirmed signal of a diabetes risk for pitavastatin either in post-marketing safety surveillance studies or in prospective studies in Europe Revised package leaflet on March, 2016. And TFDA also follow EU PI to revised Livalo® (pitavastatin) PI in Taiwan this September.

Therefore, pitavastatin is characterized by (1) strong efficacy as atorvastatin, (2) safety-low incidence of hepatic enzyme changes, and (3) low drug-drug interaction because of the unique pathway of glucuronidation.

CURRICULUM VITAE

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EDUCATION:

1986/07/01-1992/06/30	Medical Student	Chung Shan Medical College, Taichung, Taiwan
1992/07/01-1994/06/30	Internship	Chung Shan University H, Taichung, Taiwan
2003/07/01-2007/11/30	PH. D	Life Science Department, Tung-Hai University, Taichung, Taiwan
2007/12/1-2008/12/31	Visiting Scholar	University of Connecticut, Regenerative Medicine Center, Connecticut, USA
2009/09/01-2009/11/30	Visiting Scholar	Berlin Heart Center, Berlin, German.

EMPLOYMENT RECORD:

1994/07/01-1997/06/30	Resident	Internal Medicine, Veterans General Hospital, Taichung
1997/07/01-2001/06/30	Fellow	Adult Cardiology, Cardiovascular center, Veterans General Hospital, Taichung
2001/07/01-present	Attending Cardiologist	Adult Cardiology, Cardiovascular center, Veterans General Hospital, Taichung

BOARD CERTIFICATION:

1997/12 The Society of Internal Medicine, Taiwan (M4767)
2000/10 The Society of Emergency Medicine and Critical Care
2000/12 The Republic of China Society of Cardiology, Adult (S758)

RESEARCH INTEREST:

Molecular mechanism of atherosclerosis, reverse cholesterol transport
Echocardiography, non-invasive hemodynamic evaluation of heart function
Embryonic stem cell and therapeutic cloning research
Cardiac Catheterization, precutaneous coronary intervention

HDL, Atherosclerosis, and Emerging Therapies

林維文

高密度脂蛋白(HDL-C)擁有幾個重要角色：首要為膽固醇逆運送(reverse cholesterol transport)，其他角色包含抗氧化、抗血栓、抗發炎、血管內皮功能維護等，藉著排除膽固除、抑制LDL氧化、減少發炎反應等機轉，HDL-C可有效預防動脈粥狀硬化的病程。在膽固醇逆運送中，HDL顆粒可以由Apo-A1逐漸演變為Nascent HDL、 HDL_{3c}、 HDL_{3b}、HDL_{3a}、HDL_{2a}、HDL2b。顆粒將因為逐漸載滿膽固醇而逐漸飽滿變大，將堆積在周邊組織的膽固醇運送回肝臟，進而由膽汁排除。而這個過程中需要許多不同蛋白與代謝酵素的協助，例如ABCA-1、LCAT、CETP等等，若這些蛋白與酵素缺乏將造成不同疾病。藉由了解HDL-C合成與分解，有助於我們認識HDL-C的品質與功能的關聯，並重新評估合適的治療藥物。

研究指出HDL-C過低的病患會有較多的心血管疾病事件，也會有較高的動脈粥狀硬化風險。但提昇HDL-C是否就能有效改善疾病事件與風險？目前看來，HDL-C提升藥物的研究結果仍有爭議，包含CETP inhibitors 類用藥臨床研究(Illuminate、 Dal-outcome)顯示，雖然均提升了HDL-C 濃度，但沒有顯著臨床改善效果；而niacin類用藥的臨床研究結果分歧。如此引發我們思考究竟這些藥物所提升的HDL-C，是否具有心血管保護功能？

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專長：

臨床醫療

腎臟纖維化基礎研究

The Role of Prescription Omega-3 in CKD Patients with Dyslipidemia

周哲毅

高三酸甘油脂血症是心血管疾病的獨立危險因子，特別是代謝症候群或慢性腎疾病的患者，其三酸甘油脂的控制更為重要。目前用來治療高三酸甘油脂的藥物有纖維酸鹽類和菸鹼酸鹽類藥物兩種，但對於慢性腎疾病患者，因隨腎功能需劑量調整或禁用，使用上多有不便。而國外已有Omega-3多元不飽和脂肪酸的處方藥，也可應用於高三酸甘油脂症的治療，且使用於腎病變患者不用調整劑量。Omega-3多元不飽和脂肪酸主要是包含兩類，eicosapentaenoic acid (EPA)和docosahexaenoic acid (DHA)，其降三酸甘油脂的效果和濃度高低有關。目前臨床實驗證明，如要達到一定的降三酸甘油脂效果，每天服用EPA/DHA含量要達到2g以上，而要達到最理想的效果，大約要達到每日3~4g，而每日1g其實也有降三酸甘油脂的效果，只是目前較少實驗數據佐證。Omega-3多元不飽和脂肪酸除了能降三酸甘油脂外，對於高密度脂蛋白的調升，和非高密度脂蛋白膽固醇的調降，也有臨床效果。對於單純型高三酸甘油脂血症，或混合行高血脂症的治療，及國人心血管疾病的預防，相信有一定裨益。

CURRICULUM VITAE

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EDUCATION BACKGROUND:

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BOARD CERTIFICATION:

2000/11 Board of Internal Medicine, (#5791)
2004/11 Subspecialty, Cardiology, (#S1081)
2007/11 Subspecialty, Interventional Cardiology, (#DC0075)

PROFESSIONAL EXPERIENCE:

2014- Committee Member, PAH Committee, The Taiwan Society of Cardiology
2012- Director of Cardiology, Feng-Yuan Hospital, Ministry of Health and Welfare
2012- Deputy Secretary General, The Taiwan Society of Cardiology
2012-14 Committee Member, Cross-strait Committee, The Taiwan Society of Cardiovascular Interventions
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The Taiwan Society of Cardiology
The Society of Ultrasound in Medicine, Taiwan
The Society of Echocardiography, Taiwan
The Taiwan Society of Lipid and Atherosclerosis
The Taiwan Society of Cardiovascular Interventions

Improve the Cardiovascular Outcome: Advanced Consideration for Hyperlipidemia Management with Combination Therapy in High Risk Patients

曹承榮

Over the decades, numerous statin landmark trials have demonstrated a linear correlation between LDL-C level and cardiovascular event rate. The Cholesterol Treatment Trialists' (CTT) Collaboration has further established the clear relationship between LDL-C reduction and relative risk reduction (RRR) in major vascular events. In 2014, a landmark study, IMPROVE-IT trial, investigating ezetimibe added to statin therapy to lower LDL-C to the level of 53 mg/dL. It shows that ezetimibe reduces cardiovascular events with consistent relative risk reduction with statins per unit LDL-C reduction. Also, it provides the most advanced evidence that lowering LDL-C from 70 mg/dL to 53 md/dL further reduces major vascular event rate by 7.2%, with no increase in adverse events. High risk CV patients are expected to have better LDL-C level control to reduce their cardiovascular risk efficiently. A recommendation for the prescription of high-intensity statins to be initiated for high risk patients, such as ACS patients to reach the LDL-C target, however the goal attainment rate is not satisfied. Although statins are widely prescribed for such patients, the intensity of therapy and the proportion of patients achieving target LDL-C values are often not in line with recommendations due to a lack of compliance with guidelines by the physicians, a lack of compliance with treatment or poor tolerance by patients, and poor dose adaptation. It is important to consider lipid lowering therapy to improve the compliance, reduce the AE and better reach the lower LDL-C target.

Currently, all other non-statin combination lipid lowering therapies (ex. Niacin, fibrate) have not shown CV benefit when it's combined with statin. Ezetimibe is the only non-statin agent to demonstrate the CV benefit when combined with statin. The results have been widely addressed in different major lipid treatment guideline, such as 2016 ADA guideline, 2016 ESC prevention guideline and 2016 ACC consensus. Ezetimibe is suggested as the first non-statin option for lipid lowering in these guidelines. Furthermore, the lipid treatment goal concept has been widely addressed in different international guideline. The IMPROVE-IT study not only reinforced the LDL hypothesis but also demonstrate the CV benefit of ezetimibe as non-statin therapy. It also gradually shapes the lipid treatment concept to have lower LDL-C target for high risk patients.

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研究領域：

糖尿病

甲狀腺及其他內分泌疾病

Confronting Complexity to Glycemic Control: Practical Strategies to Simplify Type 2 Diabetes Care

洪逸芷

Type 2 diabetes mellitus is a world-wide chronic disease across various regions and different races. Acute complications, including hypoglycemia, ketoacidosis, or chronic complications, including cardiovascular diseases, chronic kidney disease, retinopathy, and neuropathy, are closely related with glycemic control and regular investigations. Amongst, oral or injection therapy was also mentioned with their efficacy or adverse effects during the period of therapeutic intervention for type 2 diabetic patients. In the viewpoint of UKPDS study and DPP study, biguanide (metformin) was suggested to be the very first line medication for two decades, due to its preventive role of cardiovascular episodes. Thereafter, which oral or injection therapy could be the best partner with metformin was discussed in the past ten years? Generally, it depends on different phenotypic manifestation for type 2 diabetic patients. Acarbose was suggested to be the first line anti-diabetic agent in China, together with metformin, via MARCH study. Sulfonylurea and insulin often are considered for their efficacy and lower price; Glitazone is considered for its role in insulin sensitization; DPP-4 inhibitors, incretin therapies, GLP-1 injected agonists, will be suggested for its safety to prevent body weight gain and hypoglycemia. With more and more hyperglycemic treatment, choosing a simple treatment with proven efficacy, well safety and convenience, given the complex diabetes care for our patients is critical and essential.

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獲獎事蹟：
以「糖尿病合併血脂異常治療之新進展」論文，獲頒內科學誌100年住院醫師優秀論文獎

New Insights on the Use of Acarbose for Management T2DM

傅家保

It is well acknowledged that T2DM requires a multi-dimensional approach to control the disease and improve patient outcomes. However, as lifestyle can contribute to the development of diabetes, appropriate implementation of healthy life style is always the first step in managing the patient by promoting good eating habits, encouraging weight loss and increasing the amount of physical activity.1 These changes, and in particular weight loss, are therefore recommended by many international and national bodies, such as the American Diabetes Association (ADA)/European Association for the Study of Diabetes (EASD), International Diabetes Federation (IDF) and United Kingdom' s National Institute for Health and Clinical Excellence (NICE).1-3 This is because even modest weight loss can meaningfully contribute to improved glucose control. The undigested oligosaccharides that enter the colon act as fermentable carbohydrates. Acarbose appears to have a distinct effect on gut microbiota, as it has been shown to increase fecal bifidobacteria content in patients with type 2 diabetes mellitus, thus emphasizing its potential to act in synergy on complex carbohydrate metabolism. This is an intriguing prospect, which warrants further exploration.

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林醫師專長於心臟疾病之急重症治療照護。林醫師在心律不整治療，包含使用心導管高頻燒灼手術，結合 3D 立體定位，系統治療 心室頻脈、心房顫纖維性顫動、心房撲動、心室上頻脈亦有所長。在植入性心臟電子裝置，包含使用心臟節律器醫治心搏過緩、自動去顫器醫治心室頻脈心室顫動、預防猝死之發生以及雙心室同步調律器來治療心衰竭，享有盛名。目前身兼中華民國心臟學會及台灣心律學會委員

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HTN Treatment Strategy Update: After the SPRINT Study

林圀宏

1. There are 25 leading risk factors in 1990 and 2010. High blood pressure is the rank 1 Risk factors. Years of life lost and years lived with disability were measured in units of healthy life lost. In Taiwan, high blood pressure disease is the number 8 of leading cause of death. However, it become the number 1 of leading cause of death when all correlated with high blood pressure.

2. The SPRINT trial showed patients at high risk for cardiovascular events but without diabetes, targeting a systolic blood pressure of less than 120 mm Hg, as compared with less than 140 mm Hg, resulted in lower rates of fatal and nonfatal major cardiovascular events and death from any cause, although significantly higher rates of some adverse events were observed in the intensive-treatment group.

3. Although those guidelines provide evidence-based recommendations for the management of high BP, guideline recommendations are not a substitute for clinical judgment, and decisions about care must carefully consider and incorporate the clinical characteristics and circumstances of each individual patient.

4. Single-pill combination of two drugs does not only improve medication compliance, but also reduce risks of cardiovascular diseases and healthcare cost.

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Improve the Cardiovascular Outcome: Advanced Consideration for Hyperlipidemia Management with Combination Therapy in High Risk Patients

黃偉春

Over the decades, numerous statin landmark trials have demonstrated a linear correlation between LDL-C level and cardiovascular event rate. The Cholesterol Treatment Trialists' (CTT) Collaboration has further established the clear relationship between LDL-C reduction and relative risk reduction (RRR) in major vascular events. In 2014, a landmark study, IMPROVE-IT trial, investigating ezetimibe added to statin therapy to lower LDL-C to the level of 53 mg/dL. It shows that ezetimibe reduces cardiovascular events with consistent relative risk reduction with statins per unit LDL-C reduction. Also, it provides the most advanced evidence that lowering LDL-C from 70 mg/dL to 53 md/dL further reduces major vascular event rate by 7.2%, with no increase in adverse events. High risk CV patients are expected to have better LDL-C level control to reduce their cardiovascular risk efficiently. A recommendation for the prescription of high-intensity statins to be initiated for high risk patients, such as ACS patients to reach the LDL-C target, however the goal attainment rate is not satisfied. Although statins are widely prescribed for such patients, the intensity of therapy and the proportion of patients achieving target LDL-C values are often not in line with recommendations due to a lack of compliance with guidelines by the physicians, a lack of compliance with treatment or poor tolerance by patients, and poor dose adaptation. It is important to consider lipid lowering therapy to improve the compliance, reduce the AE and better reach the lower LDL-C target.

Currently, all other non-statin combination lipid lowering therapies (ex. Niacin, fibrate) have not shown CV benefit when it's combined with statin. Ezetimibe is the only non-statin agent to demonstrate the CV benefit when combined with statin. The results have been widely addressed in different major lipid treatment guideline, such as 2016 ADA guideline, 2016 ESC prevention guideline and 2016 ACC consensus. Ezetimibe is suggested as the first non-statin option for lipid lowering in these guidelines. Furthermore, the lipid treatment goal concept has been widely addressed in different international guideline. The IMPROVE-IT study not only reinforced the LDL hypothesis but also demonstrate the CV benefit of ezetimibe as non-statin therapy. It also gradually shapes the lipid treatment concept to have lower LDL-C target for high risk patients.

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Statin Treatment and New-Onset Diabetes Mellitus

Chih-Neng Hsu

In major clinical endpoint trials, statins have been shown safe and effective. CARDS, PROVE-IT TIMI-22 and JUPITER trials demonstrated significant cardiovascular risk reduction by statins. In addition, these studies have suggested a negative effect of statin on glucose metabolism. Recent meta-analyses on large-scale trials have shown that statin treatment was associated with increase in the new onset of diabetes.

Statistics vary, but in general diabetic patients have a 2- to 4-fold greater risk for myocardial infarction (MI) or stroke than nondiabetics. The main lipid abnormalities in type 2 diabetes are a reduced HDL-C level and elevated triglycerides, leading to an increase in the total cholesterol/HDL-C ratio. Although LDL-C levels are on average no higher than in matched individuals without type 2 diabetes, the LDL-C is more likely to be oxidized as well as glycated. In addition, there is a preponderance of small dense LDL particles (so-called pattern B), and all of these changes contribute to a more atherogenic LDL-C particle. The Collaborative Atorvastatin Diabetes Study (CARDS) trial was the first statin study done exclusively in patients with diabetes. The results of this study revealed a 37% reduction in risk for cardiovascular events and 48% reduction in risk for stroke associated with the atorvastatin treatment. Based on recent evidence, Diabetes benefit the most from additional reduction in LDL, and therefore the new recommendation is to achieve an LDL goal of <70 mg/dL in this patient population.

With regard to pitavastatin, it has been reported that HbA1c significantly decreased from the baseline in diabetic patients with hypercholesterolemia during a 2-year follow-up in LIVES study. Moreover, there has been no confirmed signal of a diabetes risk for pitavastatin either in post-marketing safety surveillance studies or in prospective studies in Europe Revised package leaflet on March, 2016. And TFDA also follow EU PI to revised Livalo® (pitavastatin) PI in Taiwan this September.

Therefore, pitavastatin is characterized by (1) strong efficacy as atorvastatin, (2) safety-low incidence of hepatic enzyme changes, and (3) low drug-drug interaction because of the unique pathway of glucuronidation.

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Current Management of Atherogenic Dyslipidemia

田凱仁

在臨床上肥胖、代謝症候群、糖尿病患者經常併有混合型血脂異常，他們的血脂指標中總膽固醇(TC)、低密度膽固醇(LDL-C)及三酸甘油脂(TG)偏高，而高密度膽固醇(HDL-C)偏低，針對這類病患，治療上有許多用藥選擇。其中statins類藥物治療主要是減少LDL-C，無法有效改善HDL-C、TG、non-HDL-C、ApoB等目標，僅能降低有限的心血管風險，殘留的風險(residual risk)仍然存在。

為了進一步改善殘留風險，除了考慮併用fibrate或niacin類藥物，陸續有藥物針對提升HDL-C的品質或數量，或ApoA-I等蛋白表現。目前這些非statin類藥物臨床研究結果具爭議，引發我們思考這類藥物是否能有效改善心血管事件的風險。每日臨床工作中，該如何治療血脂異常病患？我們需要多方參考血脂治療指引與臨床文獻，評估合適且務實的臨床準則。

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The Society of Ultrasound in medicine Taiwan
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Taiwan Evidence-Based Medicine Association (TEBMA)

The Role of Prescription Omega-3 in CKD Patients with Dyslipidemia

Ben-Chung Cheng

高三酸甘油脂血症是心血管疾病的獨立危險因子，特別是代謝症候群或慢性腎疾病的患者，其三酸甘油脂的控制更為重要。目前用來治療高三酸甘油脂的藥物有纖維酸鹽類和菸鹼酸鹽類藥物兩種，但對於慢性腎疾病患者，因隨腎功能需劑量調整或禁用，使用上多有不便。而國外已有Omega-3多元不飽和脂肪酸的處方藥，也可應用於高三酸甘油脂症的治療，且使用於腎病變患者不用調整劑量。Omega-3多元不飽和脂肪酸主要是包含兩類，eicosapentaenoic acid (EPA)和docosahexaenoic acid (DHA)，其降三酸甘油脂的效果和濃度高低有關。目前臨床實驗證明，如要達到一定的降三酸甘油脂效果，每天服用EPA/DHA含量要達到2g以上，而要達到最理想的效果，大約要達到每日3~4g，而每日1g其實也有降三酸甘油脂的效果，只是目前較少實驗數據佐證。Omega-3多元不飽和脂肪酸除了能降三酸甘油脂外，對於高密度脂蛋白的調升，和非高密度脂蛋白膽固醇的調降，也有臨床效果。對於單純型高三酸甘油脂血症，或混合行高血脂症的治療，及國人心血管疾病的預防，相信有一定裨益。

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HTN Treatment Strategy Update: After the SPRINT Study

林宗憲

1. There are 25 leading risk factors in 1990 and 2010. High blood pressure is the rank 1 Risk factors. Years of life lost and years lived with disability were measured in units of healthy life lost. In Taiwan, high blood pressure disease is the number 8 of leading cause of death. However, it become the number 1 of leading cause of death when all correlated with high blood pressure.
2. The ARBs' mechanism of action, selective inhibition of angiotensin II by competitive antagonism of the angiotensin II receptors, has been speculated to reduce adverse effects and possibly improve clinical efficacy. ARBs displace angiotensin II from the angiotensin I receptor and produce their blood pressure lowering effects by antagonizing angiotensin II–induced vasoconstriction, aldosterone release, catecholamine release, arginine vasopressin release, water intake, and hypertrophic response
3. ARBs have the following actions: dilate arteries and veins and thereby reduce arterial pressure and preload and afterload on the heart, down regulate sympathetic adrenergic activity by blocking the effects of angiotensin II on sympathetic nerve release and reuptake of norepinephrine, promote renal excretion of sodium and water by blocking the effects of angiotensin II in the kidney and by blocking angiotensin II stimulation of aldosterone secretion, inhibit cardiac and vascular remodeling associated with chronic hypertension, heart failure, and myocardial infarction.
4. Perhaps most striking is the practical implications of data: even a small, 2 mm Hg fall in mean systolic BP would be associated with large absolute reductions in premature deaths and disabling strokes. A 2 mm Hg lower mean systolic BP could lead to a 7% lower risk of IHD death and a 10% lower risk of stroke death.
5. In a meta-analysis of 61 prospective, observational studies conducted with no previous vascular disease at baseline, the researchers found that between the ages of 40-69 years, each incremental rise of 20 mm Hg systolic BP and 10 mm Hg diastolic BP was associated with a twofold increase in death rates from ischemic heart disease and other vascular disease.
6. The SPRINT trial showed patients at high risk for cardiovascular events but without diabetes, targeting a systolic blood pressure of less than 120 mm Hg, as compared with less than 140 mm Hg, resulted in lower rates of fatal and nonfatal major cardiovascular events and death from any cause, although significantly higher rates of some adverse events were observed in the intensive-treatment group.
7. Although those guidelines provide evidence-based recommendations for the management of high BP, guideline recommendations are not a substitute for clinical judgment, and decisions about care must carefully consider and incorporate the clinical characteristics and circumstances of each individual patient.
8. Single-pill combination of two drugs does not only improve medication compliance, but also reduce risks of cardiovascular diseases and healthcare cost.

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Confronting Complexity to Glycemic Control: Practical Strategies to Simplify Type 2 Diabetes Care

李美月

Type 2 diabetes mellitus is a world-wide chronic disease across various regions and different races. Acute complications, including hypoglycemia, ketoacidosis, or chronic complications, including cardiovascular diseases, chronic kidney disease, retinopathy, and neuropathy, are closely related with glycemic control and regular investigations. Amongst, oral or injection therapy was also mentioned with their efficacy or adverse effects during the period of therapeutic intervention for type 2 diabetic patients. In the viewpoint of UKPDS study and DPP study, biguanide (metformin) was suggested to be the very first line medication for two decades, due to its preventive role of cardiovascular episodes. Thereafter, which oral or injection therapy could be the best partner with metformin was discussed in the past ten years? Generally, it depends on different phenotypic manifestation for type 2 diabetic patients. Acarbose was suggested to be the first line anti-diabetic agent in China, together with metformin, via MARCH study. Sulfonylurea and insulin often are considered for their efficacy and lower price; Glitazone is considered for its role in insulin sensitization; DPP-4 inhibitors, incretin therapies, GLP-1 injected agonists, will be suggested for its safety to prevent body weight gain and hypoglycemia. With more and more hyperglycemic treatment, choosing a simple treatment with proven efficacy, well safety and convenience, given the complex diabetes care for our patients is critical and essential.

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Glycaemic Variability and Complications in Patients with Diabetes Mellitus

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Good glycemic control in people with T2DM is essential to minimise microvascular complications and to help reduce risk of marcovascular complications. As T2DM is a progressive disease, patients often require increasing treatment and combination therapy over time to maintain HbA1c value at desired levels.

Currently, several specific tools have been developed to evaluate within-day blood glucose variations. Among these measures are the mean amplitude of glucose excursions (MAGEs), mean of daily differences (MODDs), meal related glycaemic excursions [mean indices of meal excursions (MIMEs)], standard deviation of blood glucose (SDBG), the M-value [which is a quantitative measure of the deviation of several blood glucose values in a specified time period from an arbitrarily selected point (e.g. 5.0 mmol/l)] and the risk of severe hypoglycaemia [measured by the low blood glucose index (LBGI)]. In practice, each of these tools requires different methods for their use; while some are easy to apply, others are more complex and not practical for clinical use. Today, there is no consensus regarding preferred measures of glycaemic variability; each has its own advantages and disadvantages.

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