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1. 講題：The relationship of osteoporosis management with cardiovascular diseases in older adults.

講師：Dr. Ching-Lung Cheung Associate Professor

摘要：Osteoporosis and cardiovascular disease (CVD) are prevalent among older adults, and emerging evidence shows that these diseases are strongly linked due to sharing risk factors and the potential sharing pathogenesis. Osteoporosis and fragility fracture are associated with increased risk of CVD, while CVD is one of the leading causes of death in fracture patients. Notably, we recently further demonstrated that there is a temporal association of hip fracture with cardiovascular diseases, with elevated CVD risk immediately after hip fracture, which cannot be simply explained by postoperative cardiovascular complications. Anti-osteoporosis drugs are prescribed to increase bone mass and reduce fracture risk. However, many anti-osteoporosis drugs are known to be associated with altered risk of CVD. In addition to anti-osteoporosis drugs, calcium supplementation is commonly prescribed to osteoporosis patients. However, evidence shows that calcium supplementation is associated with CVD. This lecture will discuss the relationship of osteoporosis, anti-osteoporosis drugs, and calcium supplementation with CVD.

2. 講題：從資料庫研究到臨床試驗

講師：傅紹懷醫師

摘要：骨質疏鬆是一種終身的慢性病，其治療也必須以終身為考量。因此 sequential therapy of osteoporosis 就成為目前骨質疏鬆領域研究的焦點。在所有的骨質疏鬆治療藥物裡面，denosumab 是最被廣泛使用的藥物之一。然而其中斷使用可能帶來骨質流失、脊椎骨折風險上升等危害。因此如何在使用 denosumab 後成功的接續治療便是本演講的主題。

3. 講題：骨鬆照顧之在地實證與臨床實踐：雲林社區長者骨鬆整合照顧模型建構成效與成本效益

講師：王貞予博士

摘要：偏鄉社區的骨質疏鬆跟肌少症均有極高的盛行率。然而，在社

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區篩檢骨質疏鬆並給予介入，僅有極少的成功案例，而在社區的肌少症篩檢跟介入更是稀缺。本團隊以社區長青食堂據點為單位，使用漸進式楔形集群隨機分派試驗(Stepped-wedge cluster randomized trial)的方式，在社區篩檢骨質疏鬆、骨折風險、肌少症，並給予相應的治療及介入；此外亦導入衛教、營養、運動、用藥評估等多專科整合服務。在經過兩年的介入後，發現能成功地降低跌倒及骨折風險，希望未來能將此模式推廣及運用到各個偏鄉社區。

4. 講題：骨質疏鬆症概論

講師：蔡易婷醫師

摘要：國民健康署的調查顯示，骨質疏鬆症是 65 歲以上老人常見慢性病的第四位，然而骨鬆卻是長期在台灣被忽視的議題。若缺乏預防、早期診斷、早期治療的全方位照護模式，一旦骨折發生，接踵而來的便是臥床、疼痛、失去活動力、營養不良、褥瘡、感染及死亡。

本次演講是一個高齡骨鬆的總覽，從台灣的盛行率開始，並著重在高齡骨鬆的病生理機轉、預防、治療觀念的更新。

5. 講題：用胸部 X 光 (CXR) AI 模型進行骨質疏鬆症篩檢

講師：涂高暢醫師

摘要：骨質疏鬆症是影響全球數百萬人，特別是老年人的重大健康問題。然而，由於缺乏方便和可及的篩查工具，骨質疏鬆症往往未被診斷和治療。在這項研究中，我們開發了一種深度學習模型 VeriOsteo®，該模型可以使用標準胸部 X 光片 (CXR) 預測骨密度 (BMD) 和骨質疏鬆症的風險。我們使用 CXR 中的 T12 和 L1 椎體圖像作為模型的輸入，這些椎體是常見的骨質疏鬆性骨折部位。我們使用來自台灣的多中心數據進行模型訓練和驗證，包括 5562 例同時具有 CXR 和雙能 X 線吸收測量 (DXA) 的病例。該模型顯示出預測的 BMD 與 DXA 測量的 BMD 之間具有高度相關性 ($R = 0.88$)，並且在骨質疏鬆症預測 ($T\text{-score} \leq -2.5$) 方面具有高準確性 (88.99%)、高敏感性 (88.71%)、高特异性 (89.36%) 和曲線下面積 (AUC) (94.61%)。VeriOsteo®代表了一種使用廣泛可得且成本低廉的 CXR 模態進行骨質疏鬆症篩查和預防的有前途且可靠的輔助工具。

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6. 講題：Nurse-led Orthogeriatric Co-management for Older Patients with a Major Osteoporotic Fracture: an Effectiveness-implementation Pre-post study

講師：Dr. Sigrid Jassens

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Introduction: Orthogeriatric co-management has proven to be beneficial in frail older patients with hip fractures. However, there is limited knowledge on implementing such programs in clinical practice and their impact on patients with other osteoporotic fractures. This study assessed the initial implementation and effectiveness of a nurse-led orthogeriatric co-management program on the traumatology ward of the University Hospital Leuven, Belgium.

Methods: The nurse-led orthogeriatric co-management intervention, named G-COMAN, involved proactive geriatric care using automated protocols and a comprehensive geriatric evaluation. First, a feasibility study was conducted. Fidelity to the intervention's core components was measured in a single-intervention group of 15 patients aged 75 and over with osteoporotic fractures using electronic health records. Feasibility and acceptability of the intervention were assessed via a 15-question survey in all involved healthcare professionals. Implementation determinants were explored through 7 focus group discussions and 2 semi-structured interviews focusing on healthcare professionals' experiences. Second, an observational study compared 2x108 patients aged 75 and older hospitalized with any type of osteoporotic fracture before and after the implementation of G-COMAN. The primary outcome was the proportion of patients with one or more in-hospital complications. A process and cost evaluation were also conducted.

Results: The feasibility study showed low fidelity in completing a pre-morbid situation questionnaire (13%) but high fidelity for the other core components, i.e., multidimensional geriatric evaluation (100%), individualized care plan development (100%), and systematic follow-up (93%). Of the 50 healthcare professionals surveyed, 94% accepted the co-management program, and 65% found it feasible. Key implementation determinants included belief in the program's usefulness and effective interdisciplinary communication. In the G-COMAN cohort, 8% fewer patients experienced in-hospital complications (46% vs 38%). Adjusted odds of in-hospital complications decreased by 51% (OR=0.49, 95% CI 0.26-0.92; p=0.027). Delirium incidence decreased (34% vs. 21%; p=0.003), and there was a significantly lower decline in iADL score and cognitive

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status at discharge. Median in-hospital length of stay increased (9 vs 12 days, $p=0.013$), but less than in the overall trauma population over the same time period. In-hospital costs did not significantly rise.

Adherence to care processes improved significantly ($p<0.001$): performance of swallowing tests (0% vs 70%), administration of laxatives (67% vs 94%), and initiation of calcium-vitamin D supplements (20% vs 58%).

Key conclusions: Fidelity, feasibility, and acceptability of the orthogeriatric co-management program were high in the initial phase of the implementation. Nurse-led orthogeriatric co-management effectively reduces in-hospital complications and improves adherence to care processes without increasing direct in-hospital costs for patients with any type of osteoporotic fractures.
