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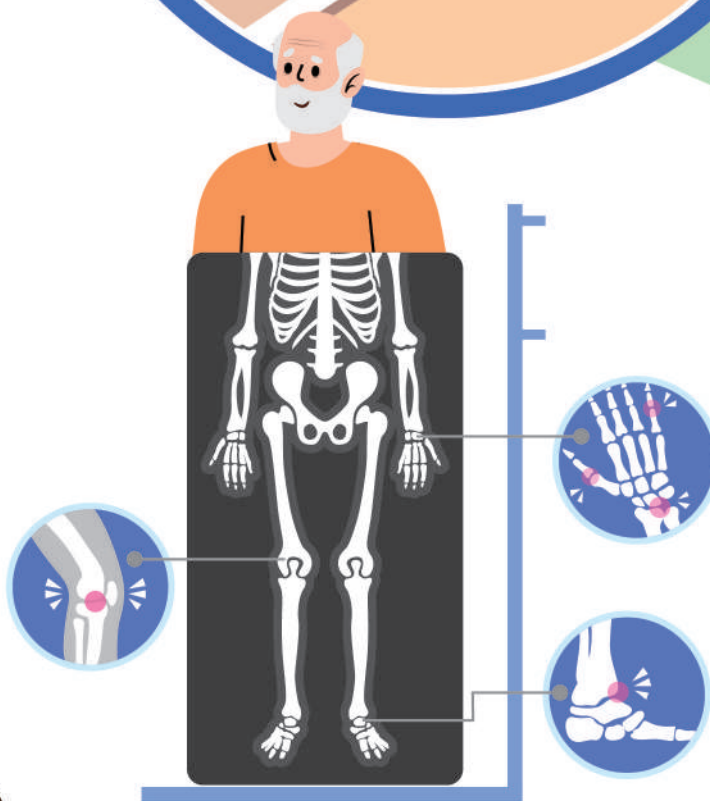
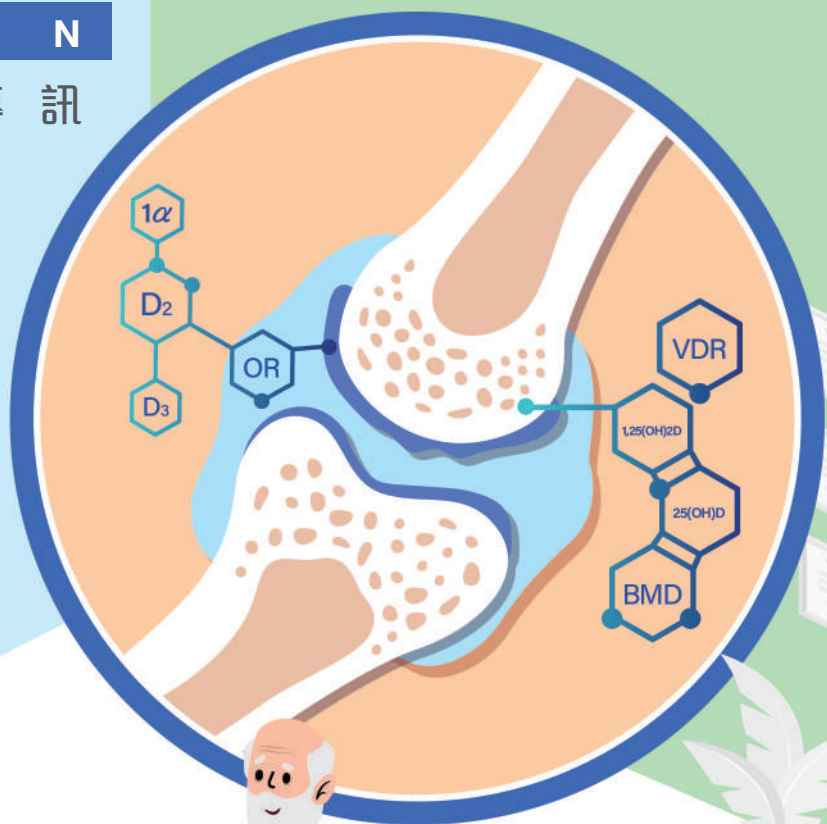
CME

BULLETIN

持續醫學進修專訊

Vitamin D and Bone Health in Older Adults

Dr HO, Sheung Tung



CME
LIVE



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EDITORIAL – February 2024 Issue



Dr CHAN, Pierre

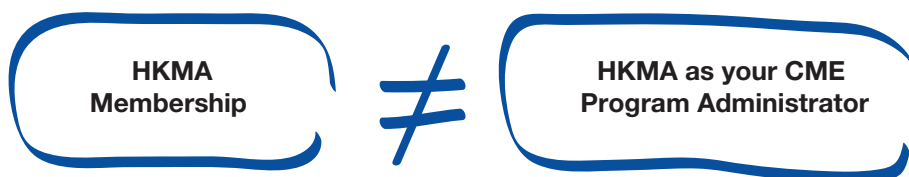
Chief Editor, The Hong Kong Medical Association CME Bulletin

The Spotlight article in our HKMA CME Bulletin is “Vitamin D and Bone Health in Older Adults” presented by Dr HO, Sheung Tung, Specialist in Orthopaedics & Traumatology. It is an opportune moment to revisit the sources of vitamin D, emphasising that adults cannot obtain an adequate amount of this vitamin solely from their diet. The recommended dietary allowance and the tolerable upper intake level is presented. The session will cover topics such as Vitamin D and Bone Health, testing for vitamin D deficiency, and the various options for vitamin D supplementation. It is important to note the potential risks of Vitamin D toxicity as well.

On February 4th, in Hong Kong, numerous football fans enjoyed the sunshine, benefiting from its role in synthesising vitamin D in the skin. However, a portion of these fans experienced symptoms of dyspnea or red angry face, because Lionel Messi remained on the bench throughout the entire Hong Kong invitation match, dressed casually in clothing and sneakers, not appearing ready to step onto the field.

We have two intriguing and challenging case series this month. The first case involves a 34-year-old male with complaints of dyspnea and fever over the past week, which will be explored in the context of Cardiology. The second case focuses on a baby boy with a rash on his face and a diagnosis of atypical Hand Foot Mouth Disease, providing an interesting Dermatology case.

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Review Questions	: Include 10 self-assessment questions in true-or-false format. (It is recommended that analysis and answers to most questions be covered in the article.)
Language	: English
Highlights	: It is preferable that key messages in each paragraph/section be highlighted in bold types.
Key Lessons	: Recommended to include, if possible, a key message in point-form at the end of the article.
Others	: List of full name(s) of author(s), with qualifications and current appointment quoted, plus a digital photograph of each author.
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Vitamin D and Bone Health in Older Adults

Vitamin D plays an essential role in maintaining a healthy mineralized skeleton. Vitamin D deficiency in adults not only causes osteomalacia and can exacerbate osteoporosis, fall and fractures; indeed it is now recognized as a major cause of metabolic bone disease in older adults.

Sources of Vitamin D

Vitamin D is naturally present in a few foods in two forms, D2 (ergocalciferol from plant) and D3 (cholecalciferol from animal). Cod liver oil, fatty fish, and egg yolk naturally contain the highest concentration of vitamin D. Among plants, sun-dried wild mushrooms, cultivated mushrooms exposed to ultraviolet B rays, and black fungus have a higher vitamin D concentration. Dietary sources usually represent only 10-20% of total vitamin D. Even fortified foods may prevent the development of rickets in children, **adults cannot obtain an adequate amount of vitamin D from diet.**

Synthesis of vitamin D from skin is a major source of vitamin D. Type B ultraviolet radiation (UVB) penetrates uncovered skin and converts cutaneous 7-dehydrocholesterol to previtamin D3, which in turn becomes vitamin D3. Older people and dark skinned population are less able to produce vitamin D from sunlight. UVB radiation does not penetrate glass, so exposure to sunshine indoors through a window does not produce vitamin D. A few minutes of sun exposure to arms and hands on most days of the week should be sufficient to maintain an adequate vitamin D level, with a plateau being reached after 20 minutes. Exposure of larger areas of skin (such as arms and lower legs) to the sun for a short period of time can increase vitamin D levels more than exposure of only small areas of skin (such as face and hands) for a longer period of time. Sunshine between 10 am and 3 pm is best for vitamin D synthesis. Use of sunscreen does not compromise vitamin D synthesis, even when applied under optimal conditions.¹

A telephone survey of Hong Kong middle-age and elderly women found 62.3% did not like going in the sun, 44.4% used a parasol and 18.8% used sunscreen.² Only 56.9% and 11% had spent 2 hours or more and between 1 to 2 hours, respectively under the sun in the past week. In general, middle-aged women tend to have greater use of sunscreen and parasols than elderly women. The reasons for sunlight avoidance may be a current culture trend of paler skin and awareness of harmful effects of sunlight despite of knowing the benefits of sunlight and vitamin D.



Dr HO, Sheung Tung

Specialist in Orthopaedics & Traumatology

Vitamin D obtained from sun exposure, foods, and supplements is biologically inert and must undergo two hydroxylations first in liver and then in kidney to form the physiologically active 1,25-dihydroxyvitamin D (1,25(OH)₂D). 1 α hydroxylase activity in kidney is simulated by parathyroid hormone (PTH), a low calcium diet, low circulating calcium or phosphate levels, and inhibited by 1,25(OH)₂D, fibroblast growth factor 23 (FGF23) and glucocorticoids.

Recommended Intakes

Recommended dietary allowance (RDA) is the average daily level of intake sufficient to meet the nutrient requirements of nearly all healthy individuals. National Institute of Health (NIH) recommended daily dose of vitamin D 600 IU for subjects aged from 1 to 60 and 800 IU for older adults aged older than 60.³ The maximum daily intake unlikely to cause adverse health effects, Tolerable Upper Intake Level, is 4,000 IU.³

Vitamin D and Bone Health

1,25(OH)₂D binds with high affinity to vitamin D receptors (VDR), and increases intestinal absorption of calcium and phosphorus. It maintains adequate serum calcium and phosphate concentrations to enable normal bone mineralization and prevents hypocalcemia. It is also needed for bone growth and bone remodeling. Vitamin D sufficiency prevents rickets and osteomalacia, maximizes the bone health and muscle function, lowers the risk of sarcopenia, and improves physical performance. Together with calcium, vitamin D also helps protect older adults from osteoporosis, falls and bone fractures.

In a low vitamin D state, less calcium is absorbed by small intestine. Low calcium level stimulates an increase in parathyroid hormone (PTH) to increase tubular reabsorption of calcium in kidney, increase bone calcium mobilization and increase 1,25(OH)₂D production. The increased serum calcium level and circulating 1,25(OH)₂D inhibits PTH levels by negative feedback mechanism and maintain the calcium homeostasis.

Vitamin D deficiency contributes to osteoporosis, muscle dysfunction, high risk of fracture, less mobility and non-union after fracture surgery. Serum 25(OH) D level < 50 nmol/L is associated with a significant decreased femur neck and total femur bone mineral density BMD.⁴ Compared with 25(OH) D level < 50 nmol/L, a 25(OH) D level ≥ 75 nmol/L had less chance of osteoporosis in postmenopausal women: the odds ratio (OR) were 0.583 of femoral neck and 0.637 in osteoporosis of lumbar spine respectively.⁵ Insufficient vitamin D also contributes to muscular dysfunction and fall,⁶ and greater decline in physical performance in elderly.⁷ In a meta-analysis of 15 prospective cohort studies, the adjusted relative risk (RR) of fracture was 1.58 for the lowest compared with the highest 25 (OH) D concentration categories; the dose-response curve showed that an obvious descending trend when 25(OH) D level < 60 nmol/L and a flat curve when 25(OH) D > 60 nmol/L.⁸ For each of 25 nmol/L decrease in 25(OH) D level, the hip fracture risk increased by 33%.⁹ Severe vitamin D deficiency with 25(OH) D < 30 nmol/L had a reduced mobility at 60 days after hip fracture surgery.¹⁰ Vitamin D deficiency was associated with an OR of 1.14 for non-union.¹¹

Vitamin D doses of 800-2,000 IU/D may provide anti-fracture benefits only when co-administrated with calcium 1,000-1,200 mg/D, especially in the elderly population with low serum 25(OH) D level. Vitamin D and calcium supplement reduce the incidence of hip fractures by 16% and any fracture by 6% in a meta-analysis of 6 randomized controlled trials (RCT) including institutionalized older people.¹² However, among community-dwelling older adults, evidence from RCTs and meta-analyses on the impact of vitamin D and calcium supplements on fractures^{13,14} or fall¹⁵⁻¹⁷ is lacking. This may be due to the population studied include both vitamin D deplete or replete. Using actual-intake analysis, a significant relative risk (RR) reduction of 30% for hip fracture risk and 14% for any non-vertebral fracture risk was observed when taking 800-2,000 IU/D, whereas no effect was observed with lower vitamin D intakes; those having 25(OH) D level of at least 61 nmol/L had a 37% reduction of hip fracture risk and 31% reduction of any non-vertebral fracture risk in elderly.¹⁸ Vitamin D-deficient adults with 25(OH) D level < 50 nmol/L could benefit from vitamin D and calcium supplementation that brings them into 25(OH) D range of 50-100 nmol/L while those vitamin D-replete adults with 25(OH) D levels in the range 50-100 nmol/L are unlikely to benefit from supplementation.

Vitamin D level has a biphasic effect (U-shape curve) on fracture risk and fall risk. A prospective observation study revealed an increased risk of fracture in men was observed with either 25(OH) D level < 36 nmol/L or above 75 nmol/L.¹⁹ A RCT suggested the optimal fall and fracture prevention was achieved with mean serum 25(OH) D levels between 80 and 95 nmol/L; fall rate increase as serum 25(OH) D exceed

100-115.5 nmol/L.²⁰ A high vitamin D doses, either at monthly 60,000-100,000 IU or daily > 4,000 IU, appears to be harmful with regard to falls, fracture risk and bone mineral density (BMD), especially for people without vitamin D deficiency and at low fracture risk.²¹ Based on double-blinded RCTs for fall and non-vertebral fracture prevention, serum 25(OH) D levels of about 75 – 110 nmol/L provide optimal benefits without increasing health risks (mainly hypercalcaemia) with oral doses of 1,800 to 4,000 IU/D.²²

Vitamin D Status and Inadequacy

Although 1,25(OH)₂D is the physiologically active form of vitamin D, **the total serum 25(OH) D level is the best indicator of vitamin D status.** 25(OH) D has the highest concentration of all vitamin D metabolites. Its level remain stable for almost 2 weeks and vitamin D toxicity is thought to be a function of 25(OH) D instead of 1,25(OH)₂D. However, during an acute inflammatory insult, 25(OH) D level can drop abruptly.²³

Low 25(OH) D level may trigger PTH release, increase bone turnover and progressive bone loss. The proposed 25(OH) D cut off for optimal bone health is the level that reduces PTH to a minimum and increases calcium absorption to its maximum. PTH level plateau at a minimum steady-state level as serum 25(OH) D level approach and raise above approximately 75 nmol/L.^{24,25} Such serum 25(OH) D level is lower than that needs to optimize intestinal calcium absorption (85 nmol/L)²⁶ and neuromuscular performance (95 nmol/L)²⁷. A serum 25(OH) D level at 100-150 nmol/L is desirable for immunomodulatory hormonal effects.²⁸ The association of serum 25(OH) D levels and health status is summarised in the below table 1.

Table 1. The association of serum 25(OH) D levels and health status

nmol/L	ng/ml	Health Status
< 25 or 30	< 10 or 12	Severe deficiency: can lead to osteomalacia in adults
30 to < 50	12 to < 20	Deficiency: inadequate for bone and overall health in healthy individuals, raised parathyroid hormone level
≥ 50	≥ 20	The minimally adequate for bone and overall health in healthy individuals ³
≥ 75	≥ 30	Desirable for older adults and individuals at elevated risk for falls and fracture ²²
100-150	40-60	Desirable for immunomodulatory hormonal effects on innate and adaptive immune systems ²⁸
> 375	> 150	Toxic level ³

Testing for Vitamin D Deficiency

In adults, symptoms of vitamin D deficiency are non-specific, such as fatigue, bone pain, muscular pain and weakness. Vitamin D deficiency should be suspected in older adults with difficulty in rising from seated position, waddling gait, falls, osteoporosis and fractures.

Laboratory findings suggesting possible vitamin D deficiency include elevated PTH level; elevated total or bone alkaline phosphatase (ALP) level, especially with normal liver enzymes; low serum calcium +/- serum phosphorus level; and low 24-hour urine calcium excretion (in the absence of thiazide use). Raised PTH and ALP are seen before serum calcium +/- phosphorus level drop.

Radiographic findings suggesting possible vitamin D deficiency include osteopenia or osteoporosis; non-traumatic or fragility fractures and skeletal pseudofracture. The classic radiological Looser's zone fractures occur only in extreme cases or at a late stage.

25(OH) D testing should be done for those at risk for deficiency or those with laboratory or radiographic findings commonly associated with vitamin D deficiency. The serum 25(OH) D level provides an accurate assessment of vitamin D body stores, helps identify the need and the dosage of vitamin D supplementation.

Predictors for low 25(OH) D are higher age, higher body mass index BMI, use of walking aid, limited time spent outdoors in summer, smoking, physical inactivity, no calcium supplement, no use of vitamin D or multivitamin.^{29,30} Elderly people produce 75% less cutaneous vitamin D than young adults, even if regularly exposed to sunlight and have reduced 1- α hydroxylase activity. Obese people frequently have marginally or deficient serum 25(OH) D, as vitamin D accumulates in excessive fatty tissue but is not easily utilized by the body; every increase in 1 unit of BMI results in 1.25% reduction in serum 25(OH) D.³¹

People with fractures, particularly fragility fractures or hip fractures, have a high prevalence of vitamin D insufficiency or deficiency. A study of 527 adults with a mean age of 49.7 years revealed 71% had a 25(OH) D < 75 nmol/L, 40% had 25(OH) D < 50 nmol/L and 11% had 25(OH) D < 25 nmol/L.³² The prevalence of vitamin D deficiency varies with types of fractures: 13-16% for ankle and wrist fractures; 28-50% for long bone fractures; 32 and 34-80% for hip or proximal fractures.³³

Other clinical risk factors for vitamin D deficiency include:

1. inadequate vitamin D intake: vegan diet, people do not eat fish or egg, intolerance to lactose of dairy products
2. fat malabsorption: inflammatory bowel disease (Crohn's disease, ulcerative colitis), celiac disease, cystic fibrosis, short bowel syndrome, pancreatitis, amyloidosis (also at risk of other fat-soluble vitamin deficiency e.g. vitamin A, E, K)
3. renal disease: chronic kidney disease CKD with impaired renal 1- α hydroxylase activity; nephrotic syndrome with decreased levels of vitamin D-binding protein
4. liver disease: severe liver disease or failure with decreased 25-hydroxylase activity
5. gastric bypass surgery e.g. after bariatric surgery for morbid obesity
6. medications which may interfere with vitamin D absorption or metabolism

A number of drugs are known to accelerate vitamin D catabolism by pregnane-X-receptor (PXR)-ligands. These drugs include anticonvulsants, antibiotics (clotrimazole, rifampicin), antihypertensives (nifedipine, spironolactone), antiretroviral drugs (ritonavir, saquinavir), antineoplastic drugs (cyclophosphamide, tamoxifen, paclitaxel), glucocorticoid, endocrine drugs (cyproterone acetate), herbal medicines (St. John's wort, kava kava).³⁴ Some drugs interfere with vitamin D absorption e.g. cholesterol lowering drugs (cholestyramine, colestipol) and orlistat. Statin reduces cholesterol synthesis and thus vitamin D synthesis.

Vitamin D deficiency is extremely common in Hong Kong Chinese. The prevalence of vitamin D deficiency among 5,276 Chinese participants of the Hong Kong Osteoporosis Study was 43.8% and the prevalence of insufficiency was 90.1%.³⁵ Among healthy, non-smoking, non-obese young Hong Kong adults, almost all (99%) did not meet the criteria of sufficient vitamin D; 65.4% had vitamin D deficiency; and 6.6% had severe vitamin D deficiency.³⁶ Of child-bearing women, 74% had vitamin D deficiency and 18% had severe vitamin D deficiency.³⁷ Of ambulatory, community-dwelling adults older than 50, 22.5% had serum 25(OH) D < 50 nmol/L and 62.8% had serum 25(OH) D < 75 nmol/L.³⁸ Hong Kong is at 22° N latitude, well below 35-40° N latitude at which UV intensity is not sufficient for skin synthesis of vitamin D in winter. Nevertheless, the mean serum 25(OH) D was consistently < 50 nmol/L in children, young and older adults during spring.³⁹

Which to Use as Vitamin D Supplementation

Vitamin D3 (cholecalciferol) and vitamin D2 (ergocalciferol) are equivalent in absorption. Vitamin D3 has a higher affinity for vitamin D binding protein and 5 times faster conversion rate of D3 to 25(OH) D3 by mitochondrial vitamin D 25-hydroxylase. As such, D3 is 87% more potent in raising and maintaining serum 25(OH) D level and produces 2 to 3 fold greater storage of vitamin D than D2 at dose of 50,000 IU/week for 12 weeks.⁴⁰ A large single dose of 50,000 IU D3 is 9.5 times more potent than D2;⁴¹ whereas for daily dose, D3 is only 1.7 times more potent.⁴² The half-life of D3 varies between 3 and 6 weeks. Optimal vitamin D administration is preferably on a daily or weekly basis for the most stable 25(OH) D concentrations.

Calcifediol (25-hydroxyvitamin D3) is recently available in Hong Kong. There are many pharmacological advantages of calcifediol as a vitamin D supplement than D3 as it increases serum 25(OH) D level more rapidly and the dose-response curve is linear and more predictable.⁴³ It may be preferable to D3 for patients with obesity (more hydrophilic and less likely to be sequestered in adipose tissue), liver diseases (does not require hepatic metabolism for activation as D3), malabsorption (intestinal absorption is relatively preserved in fat malabsorption). The recommended dose is 0.266 mg/week for 5 weeks, then 0.266 mg/month for severe vitamin D deficiency with serum 25(OH) D level < 25 nmol/L and 0.266 mg/month for vitamin D deficiency with serum 25(OH) level < 50 nmol/L.

Vitamin D is better absorbed when it is consumed with fat-containing meal.⁴⁴ Taking vitamin D with the largest meal of the day increases the average serum 25(OH) D level by 50%.⁴⁵

Vitamin D Supplementation

Most guidelines recommend a 25(OH) D target of 50 nmol/L at population level.^{3,46} Endocrine Society and European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis and Musculoskeletal Diseases (ESCEO) both advocate a higher 25(OH) D target of 75 nmol/L, a level desirable for older adults and individuals at elevated risk for falls and fracture.^{47,48} **The recommended vitamin D supplementation dose should suffice to increase the serum 25(OH) D level to 75 nmol/L or above** and this level should be optimally maintained with a maintenance dose, particularly for those diagnosed with osteoporosis or fragility fracture.

Empiric vitamin D supplementation without testing can be justified for patients who have no overt risk factors or evidence of deficiency but are thought to have inadequate sun exposure or dietary intake. A daily dose of 800 to 2,000 IU can prevent vitamin D deficiency and is well below the current safe upper limits. This is perhaps more effective than enhanced sunlight exposure in improvement of vitamin D status in non-Western people.⁴⁹

40 IU/D of vitamin D is required for each 1 nmol/L increase of 25(OH) D.⁵⁰ For nutritional insufficiency with 25(OH) D level between 50-75 nmol/L, a daily dose of 800 to 1,000 IU D3 will bring 25(OH) D to 7 nmol/L higher over a 3-month period.⁵¹ Higher doses may be necessary for patients who had gastrectomy or malabsorption history. All patients should maintain a daily calcium intake of at least 1,000 mg (for ages 31 to 50 years) to 1,200 mg (for ages 51 and older) per day.

For nutritional deficiency with 25(OH) D level below 50 nmol/L, a daily dose of 800 IU D3 reached steady state after at least 12 weeks of treatment, and only 30% reached the target of >75 nmol/L after 6 months.⁵² The compliance of daily vitamin D3 and calcium supplementation can be very low in elderly e.g. only 23.8% fully adherence and 26.2% partially adherence after 3 months.⁵³ **In vitamin D deficiency, serum 25(OH) D level should be determined, so that vitamin D loading may be used** to ensure the target 25(OH) D level can be quickly reached before maintenance dose. Achieving blood levels of 25(OH) D above 75 nmol/L may require more than 2,000 IU vitamin D daily. The Endocrine Society advises to achieve a level of 100 nmol/L 25(OH) D to ensure an individual's true value is greater than 75 nmol/L while this will not result in toxicity.⁴⁷

A formula to calculate the required loading dose is devised: dose (IU) = 40 x [25(OH) D target level – 25(OH) D level at baseline] x body weight (kg).⁵⁴ The formula is not valid for individuals < 18 years of age, having a body weight > 125 kg, or having a BMI > 40. The target level may be set to 100 nmol/L (75 nmol/L + standard error of estimate of 23 nmol/L, a measure of the variability of 25(OH) D response to the loading dose). With this target level of 100 nmol/L, using a loading dose of 50,000 IU twice a week, steady state of 25(OH) D was reached and 79% achieved level 75 nmol/L after 5 weeks, and level > 150 nmol/L should occur in < 3% of the patient.⁵² Other loading dose regimen include 30,000 IU twice weekly for 5 weeks,⁵⁵ and 50,000 IU weekly for 4 weeks;⁵⁶ both followed by 2,000 IU/D for maintenance.

When vitamin D is co-prescribed with an oral anti-resorptive agent, the maintenance dose of 800-1,000 IU can be started, but may increase to 2,000 IU/D in conditions of severe vitamin D deficiency, renal failure, or obesity. Patients with symptomatic deficiency or those requiring treatment prior to receiving a potent anti-resorptive agent may receive before-hand loading dose of 50,000 IU/week over 6 weeks, followed by maintenance doses of 800-1,000 IU daily.⁴⁶

Those taking prednisolone ≥ 2.5 mg/D for ≥ 3 months are recommended to take sufficient daily vitamin D 800 IU and calcium 1,000-1,200 mg and maintain a serum 25(OH) D ≥ 50 nmol/L.⁵⁷ Elderly on high-dose of proton pump inhibitors, especially over a long-term period, is recommended to receive vitamin D and calcium supplementation.⁵⁸

Vitamin D Toxicity

Increased public awareness of vitamin D-related health benefits may increase the risk of vitamin D toxicity (VDT) due to inadvertent or improper intake of extremely high doses of pharmacological preparations of vitamin D. Manifestations of vitamin D toxicity include hypercalcaemia, hypercalciuria and nephrocalcinosis. Hypercalcaemia is responsible for producing most of the symptoms of vitamin D toxicity. Early symptoms of vitamin D toxicity include gastrointestinal disorders like anorexia, diarrhoea, constipation, nausea, vomiting, and abdominal pain. Other symptoms include polyuria, polydipsia, dehydration, weakness, nervousness and itching. Bone pain, drowsiness, continuous headaches, irregular heartbeat, loss of appetite, muscle and joint pain are other symptoms that are likely to appear within a few days or weeks.

A lowest-observed-adverse-effect-level of 10,000IU/day is identified from two randomised controlled trials in humans, to which an uncertainty factor of 2.5 is applied to account for the absence of a no-observed-adverse-effect-level; **a tolerable upper intake limit of 4,000 IU/day** is established for adults (including pregnant and lactating women) and for adolescents aged 11-17 years.⁵⁹

25 clinical cases of vitamin D intoxication in adults have been reported in literature.⁶⁰ The rarity of reports of vitamin D toxicity can be explained in part by the kidney's ability to limit production of active 1,25(OH)₂D. When ultra-high dose of vitamin D supplementation is used, regular monitoring of serum calcium, phosphorus, PTH and creatinine is prompted. Uncoupling of calcium from PTH levels may be a clue to impending vitamin intoxication. Use of thiazide diuretics in combination with calcium and vitamin D supplements may cause hypercalcaemia in the elderly, or those with compromised renal function or hyperparathyroidism.

A 25(OH) D level of 200 nmol/L is the lowest reported level associated with toxicity in patient without primary hyperparathyroidism with normal renal function; most patients with vitamin D toxicity have levels greater than 375 nmol/L.⁶¹ Furthermore, 25(OH) D concentration up to 140 nmol/L is not associated with an increased all-cause mortality risk; whereas a nonlinear inverse association with risk of all-cause mortality starts to increase at 25(OH) D level < 75 nmol/L.⁶² Serum 25(OH) D level < 200 nmol/L should be safe.

Vitamin D, More Than Bone Health

Vitamin D has other roles in the body, including reduction of inflammation as well as modulation of processes such as cell growth, neuromuscular and immune function, and glucose metabolism. Many genes encoding proteins that regulate cell proliferation, differentiation, and apoptosis are modulated in part by vitamin D. Many tissues have vitamin D receptors, and some convert 25(OH) D to 1,25(OH)₂D.

Observational studies find an association of low serum levels of 25(OH) D and an increased risk of cardiovascular disease (ischaemic stroke, ischaemic heart disease, myocardial infarction, heart failure and cardiovascular death), type II diabetes, cancers (colorectal, lung and breast cancer), and infections including COVID 19.²¹ Low 25(OH) levels have also associated with an increased risk of depression, multiple sclerosis, and cognitive decline. Unfortunately, clinical trials do not find that vitamin D supplements helped prevent the risk of cancer, cardiovascular disease, diabetes, and multiple sclerosis.

Both vitamin deficiency and insufficiency are strongly associated with all mortality outcomes, as evidence by RCTs, population-based cohort studies and Mendelian randomization study. The cut-off of 50 nmol/L works well for all-cause mortality and cancer mortality; whereas 60 nmol/L may be a better cut-off for cardiovascular disease and respiratory disease mortality, according to the UK Biobank cohort study of 502,490 subjects.⁶³ In the same study, self-reported vitamin D supplement use was significantly associated with 10% lower all-cause mortality. Vitamin D supplementation may lower the cancer mortality by 13%.⁶⁴

Summary

Vitamin D insufficiency or deficiency is very common in Hong Kong Chinese. Exposure to sunshine for skin synthesis of vitamin D is important. Vitamin D deficiency contributes to osteomalacia, osteoporosis, fall, fracture and all mortality outcomes. Vitamin and calcium supplement protect elderly population with low serum 25 (OH) D level against the risk of fracture. People at risk for vitamin D deficiency, particularly with fragility fracture, should have 25(OH) D level checked. The recommended vitamin D supplementation dose should suffice to increase the serum 25(OH) D level to 75 nmol/L or above; loading doses may be used to ensure rapid achievement of target level before maintenance dose. A daily intake of 4,000 IU or a serum 25(OH) D level below 200 nmol/L is well below the current safe upper limits.

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Q&A Assessment Questions

Complete Spotlight, **1 CME Point** will be awarded for at least five correct answers

Answer these on page 14 or make an online submission at: www.hkma.org.

Please indicate whether the following statements are true or false.

1. Dietary sources of vitamin D, with fortified foods, should be adequate for most adults.
2. Use of sunscreen compromise the vitamin D synthesis by skin upon exposed to sunlight.
3. The recommended dietary allowance of vitamin D is higher for older adults over than 60 compared with younger adults.
4. Vitamin D and calcium supplementation have a positive impact on the fracture risk in community-dwelling older adults.
5. In vitamin D deficiency, elevated parathyroid hormone and total alkaline phosphatase level usually precede hypocalcaemia.
6. Predictors for low vitamin 25(OH) D include all of the below: higher age, higher BMI, physical inactivity, limited time spent outdoors in summer, smoking, no use of vitamin D or multivitamin supplementation.
7. The desirable serum 25(OH) D level is above 75 nmol/L for bone health in older adults.
8. Vitamin D3 is preferred to vitamin D2 as vitamin D supplement.
9. Vitamin D and calcium supplement should be prescribed with anti-resorptive agents in the treatment of osteoporosis.
10. Monitoring of serum 25(OH) D level is advised to detect early vitamin D toxicity for treatment of vitamin D deficiency when the vitamin D supplementation dose is a few times of Recommended Dietary Allowance.

Answer to January 2024

Spotlight – Current Clinical Applications of Probiotics

1. T 2. F 3. T 4. T 5. F 6. F 7. T 8. T 9. T 10. T

Complete Cardiology case,
0.5 CME POINT will be awarded for
at least 2 correct answers in total

A Young Patient Presented with Symptoms of Right Heart Failure

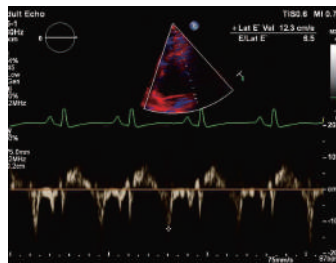


Figure 1a

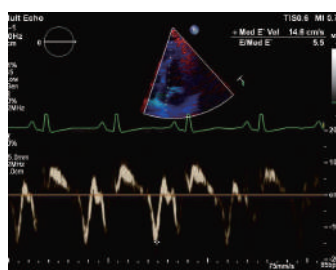


Figure 1b

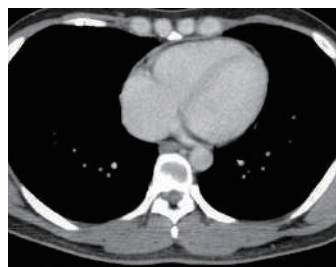


Figure 2

A 34-year-old male complained of dyspnea and fever for a week. His septic and autoimmune workup were negative, except raised coxsackie antibody level. He was found to have pericardial effusion and it was then completely drained. A few months later, the patient presented with progressive exertional dyspnea, lower limb edema and hepatomegaly.

Echocardiogram showed normal left ventricular ejection fraction and mitral annulus velocity profile were measured (Fig 1a, Fig 1b). The patient also underwent CT thorax (Fig 2) and invasive hemodynamic measurements (Fig 3).

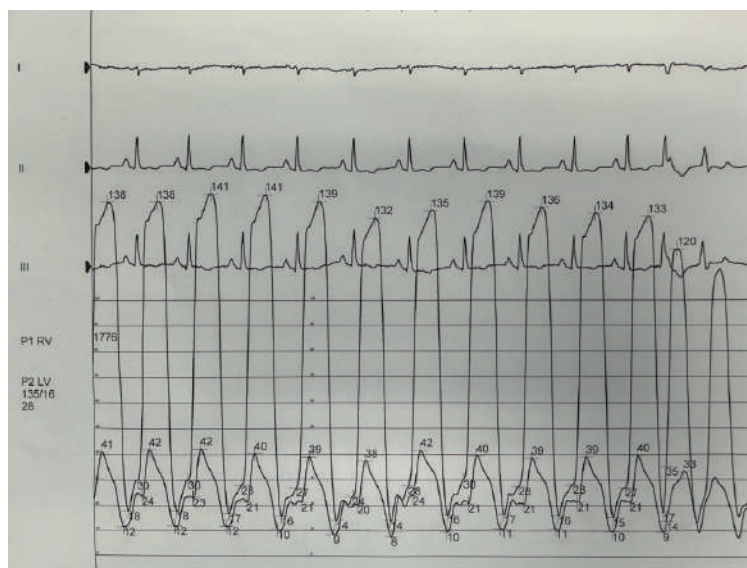


Figure 3

Q&A

Please answer ALL questions

Answer these on page 14 or make an online submission at: www.hkma.org.

He received a course of medical treatment, however, his exercise tolerance remained limited. He subsequently received an operative treatment with full recovery afterwards.

1. What is the diagnosis?

- A. Restrictive pericarditis
- B. Pulmonary embolism
- C. Constrictive pericarditis
- D. Severe tricuspid regurgitation

2. The following are the striking findings on this patient EXCEPT:

- A. Equalization of intracardiac diastolic pressures
- B. Dip-and-plateau pattern of LV pressure curve
- C. Severe diastolic dysfunction and pulmonary hypertension
- D. Mitral annulus reversus

3. Which definitive operative management did the patient receive?

- A. Tricuspid valve replacement
- B. Left ventricular assist device
- C. Pericardiectomy
- D. Pulmonary embolectomy

Cardiology January Answers

Discussion:

Patients with underlying malignancy especially of lung origin often present with complaints of dyspnoea. Their symptoms are often attributed to progression of their underlying lung malignancy leading to respiratory complications such as a malignant pleural effusion, pulmonary embolism or even pneumothorax. Metastasis to the pericardium causing a malignant pericardial effusion may often be missed. Our case was an example of a patient with underlying lung malignancy with metastasis to the pericardium and causing a massive pericardial effusion with tamponade. This is evidenced by the ECG showing presence of electrical alternans. Electrical alternans is classically exemplified by presence of normally conducted QRS complexes that differ in height in a biphasic pattern. It occurs due to the presence of a heart swinging in a large fluid filled pericardium. If the patient exhibits signs of hemodynamic

Answers: 1. D 2. C 3. B

instability, tamponade is often present, and an echocardiogram is necessary to confirm and guide urgent pericardiocentesis. After successful puncture and aspiration, agitated saline is injected as a safety measure to confirm entry into the true pericardial space with no extension into the cardiac chambers before a dilator and a pericardial drain is subsequently inserted.

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一月臨床心臟科個案研究之內容承蒙張玲玲醫生及陳斯晷醫生提供

香港醫生網

The Hong Kong Doctors Homepage

www.hkdoctors.org

The Hong Kong
Doctors Homepage



This web site is developed and maintained by the Hong Kong Medical Association for all registered Hong Kong doctors to house their Internet practice homepage. The format complies with the [Internet Guidelines](#) which was proposed by the Hong Kong Medical Association and adopted by the Medical Council of Hong Kong.

We consider a practice homepage as a signboard or an entry in the telephone directory. It contains essential information about the doctor including his specialty and how to get to him. This facilitates members of the public to communicate with their doctors.

This website is open to all registered doctors in Hong Kong. For practice page design and upload, please contact the Hong Kong Medical Association Secretariat.

由香港醫學會成立並管理的《香港醫生網》，是一個收錄本港註冊西醫執業網頁的網站。內容是根據由香港醫學會擬訂並獲香港醫務委員會批准使用的[互聯網指引](#)內的規定格式刊載。

醫生的「執業網頁」性質與電話索引內刊載的資料相近。目的是提供與醫生執業有關的基本資料，例如註冊專科及聯絡方法等，方便市民接觸個別醫生。

任何香港註冊西醫都可以參加《香港醫生網》。關於網頁版面安排及上載之詳情，請與香港醫學會秘書處聯絡為荷。

Complete Dermatology case,
0.5 CME POINT will be awarded for
at least 2 correct answers in total

Dermatology Series for February 2024 is provided by:
Dr NG, Shun Chin, Dr TANG, Yuk Ming William, Dr CHAN, Hau Ngai Kingsley,
Dr LEUNG, Wai Yiu, Dr KWAN, Chi Keung, Dr CHENG, Hok Fai and Dr KOH, Chiu Choi
Specialists in Dermatology & Venereology
二月皮膚科個案研究之內容承蒙吳順展醫生、鄧旭明醫生、陳厚毅醫生、梁偉耀醫生、
關志強醫生、鄭學輝醫生及許招財醫生提供。

One-Month Old Newborn with Annular Rash over Face and Soles

A 40-day old baby boy with rash over face and sole for 2 weeks admitted to pediatric ward found to be positive for rhinovirus/enterovirus RNA in nasopharyngeal swab. He was discharged with diagnosis of atypical hand foot mouth disease. He was seen again 2 weeks later, and the rash was persistent as showed in Figure 1 and 2. Most of the facial erythema macules were resolved while the one over mid forehead was more prominent and became more indurated and annular. There were also some annular indurated papules over soles and also few new erythema papules over upper chest.



Figure 1



Figure 2

Q&A

Please answer ALL questions

Answer these on page 14 or make an online submission at: www.hkma.org.

- What is the most likely clinical diagnosis for baby's rash?
 - Acropustulosis of infancy
 - Hand foot mouth disease
 - Neonatal lupus erythematosus
 - Erythema multiforme
 - Congenital syphilis
- What would you like to ask for maternal history?
 - Antenatal syphilis test result
 - Any maternal history of systemic lupus erythematosus and/or other autoimmune diseases
 - Any other siblings with similar skin eruptions in infancy
 - All of the above
- Which of the investigation before would be most helpful for your provisional diagnosis?
 - Thyroid function test
 - Anti-ENA
 - Anti-skin titres
 - Paired serum for viral titres
- What is the important associated extracutaneous manifestation have to be ruled out?
 - Heart block
 - Food allergy
 - Scabies
 - Natal teeth

Dermatology January Answer

- E**
The differential diagnoses include cherry angioma, pyogenic granuloma, Kaposi's sarcoma, bacillary angiomatosis, blue rubber bleb naevus and angiokeratoma.
- A**
The diagnosis is cherry angioma also known as Campbell de Morgan spot or senile angioma.
- E**
Diagnosis of cherry angioma is often made clinically and no investigation or specific test is needed to arrive the diagnosis. However, if the condition is in doubt or other diagnoses are suspected, skin biopsy may be considered.
- E**
Cherry angioma presents typically in middle age. It can be widespread on anywhere of the body except

mucosal region. Histology reveals that this lesion is formed by a proliferation of dilated venules in thickened papillary dermis.

- E**
Cherry angioma is required no treatment because of harmless nature. Treatment like shave excision, curettage and electrodesiccation, pulsed dye laser and cryotherapy may consider only if the lesion causes irritation, haemorrhage or in instances in which the lesions are deemed to cosmetically undesirable by patient. However, all these measures may result a keloid or scar afterwards. However, systemic antibiotic is not useful as this is not an infection.

Dermatology Series for January 2024 is provided by:
Dr KWAN, Chi Keung, Dr TANG, Yuk Ming William, Dr CHAN, Hau Ngai Kingsley,
Dr LEUNG, Wai Yiu, Dr NG, Shun Chin, Dr CHENG, Hok Fai and Dr KOH, Chiu Choi
Specialists in Dermatology & Venereology
一月皮膚科個案研究之內容承蒙關志強醫生、鄧旭明醫生、陳厚毅醫生、梁偉耀醫生、
吳順展醫生、鄭學輝醫生及許招財醫生提供。

Name

Signature:

HKMA Membership No.

HKID No. - xxx(x)

Contact Tel No.:

Answer Sheet

February 2024

ANSWER SHEET

Please answer ALL questions and write the answers in the space provided.

SPOTlight

Complete Spotlight, 1 CME point will be awarded for **at least 5** correct answers

1	2	3	4	5	6	7	8	9	10
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Cardiology

Complete Cardiology, 0.5 CME point will be awarded for **at least two** correct answers

1	2	3
<input type="text"/>	<input type="text"/>	<input type="text"/>

Dermatology

Complete Dermatology, 0.5 CME point will be awarded for **at least two** correct answers

1	2	3	4
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

A maximum of 20 points can be awarded for self-study per year and no upper limit of CME points for attending CME lectures

Please return the completed answer sheet to the HKMA Secretariat (email: cme@hkma.org or Fax: 2865 0943) on or before **15 March 2024** for documentation.

If you want to complete the exercise online, please scan the below QR code and you are **NOT** required to return the answer sheet by fax/email.



CME Self-Studies Series

You can register the CME Lectures and finish the CME Self-Studies Series within the webpage (https://www.thkma.org/cme/continuous_medical_education/).

Don't wait! Please register and create your own account through <https://www.thkma.org/members/register.php> (1st time register account is limited on desktop ONLY) to experience our new Members Portal.

Please scan the QR code below to access the latest CME Self-Studies Series online.



HKMA CME Lecture Policy and Procedure

Lecture in Physical Attendance Mode

1. Unless otherwise specified, registrations are accepted from HKMA Members or Medical Practitioners in Hong Kong ONLY. Non-Medical Practitioners will not be served.
2. Prior registration is strictly required.
3. Registration is basically on a first-come-first-served basis except for district-based lectures that registration priorities will be given to doctors practicing in the related districts.
4. No walk-in will be accepted. Attendance without registration will not be recognized and no CME point(s) will be awarded. (*Please refer to the policy of "Non-registrants at CME Lecture in Physical Attendance Mode")
5. HKMA Members and Medical Practitioners intending to register for CME lectures must complete the online registration form at https://www.thkma.org/cme/continuous_medical_education/ and return to HKMA Secretariat before deadline.
6. Confirmation emails will be sent out by the HKMA Secretariat to successful registrants before each lecture. Please ensure that registration is confirmed before coming to CME lecture.
7. Successful registrants must attend the lecture in real-time and sign in person the attendance form(s) for obtaining the CME point(s).
8. Successful registrants can only attend ONE lecture at a time regardless of which CME providers. Only 1 Lecture will be counted if the doctor watches multiple CME Lectures conducted at the same time.

Non-registrants at CME Lecture in Physical Attendance Mode

1. Basically, all CME lectures require prior registration and entertain no non-registrant. But under exceptional circumstances that non-registrants come to CME lecture without prior registration, a non-registrant fee will be charged.
2. If under such exceptional circumstances, non-registrants must produce proof of personal identity together with MCHK registration for verification by the on-site HKMA staff.
3. Non-registrants must settle the exact amount of the non-registrant fees in cash or cheque before accessing the lecture. Electronic payment is not accepted, and no change will be provided.
4. The non-registration fees schedule is shown below:

	HKMA Premises	Venues outside HKMA Premises
HKMA Member	HK\$150 per person	HK\$300 per person
Non-HKMA Member	HK\$300 per person	HK\$600 per person

5. Any non-registrants in breach of the above policy will have to bear full legal responsibilities. The HKMA serves rights to take action against non-registrants for loss incurred for the non-observance.
6. This policy takes effect from 1 June 2023.

Lecture in Online (via ZOOM)

1. Registration is open to HKMA Members or Medical Practitioners in Hong Kong ONLY. Non-Medical Practitioners will not be served.
2. Prior registration is strictly required.
3. Registration is basically on a first-come-first-served basis.
4. No walk-in will be accepted. Attendance without registration will not be recognized and no CME point(s) will be awarded.
5. Please complete the online registration form at https://www.thkma.org/cme/continuous_medical_education/ and return to HKMA Secretariat before deadline.
6. Confirmation / notification emails will be sent out by the HKMA Secretariat to successful registrants 1 day and 1 hour before each lecture. Please ensure that registration is confirmed before attending the CME lecture online.
7. CME accreditation will apply to both specialist and non-specialist doctor for each lecture. If the CME accreditation is for non-specialist doctors only, there will be a notice showing in the registration form.
8. CME point(s) will be awarded to successful registrants after attending the lecture and completing the quiz with at least 50% correct answers.
9. Successful registrants must watch the lecture in real-time and complete the online quiz within the designated time after the lecture. Late submission of the quiz will not be accepted.
10. Successful registrants can only attend ONE lecture at a time regardless of which CME providers. Only 1 Lecture will be counted if the doctor watches multiple CME Lectures conducted at the same time.
11. Successful registrants may install ZOOM app/launcher system to join the lecture online.
12. Wi-Fi connection is recommended on your mobile device or computer while watching the lecture via ZOOM. Unstable internet connection may cause interruption to the broadcasting.
13. In case of technical issue and broadcast interruption, please be patient while the HKMA Secretariat works on fixing the problem; the video should resume in a few minutes.

Lecture in Hybrid Format (Online + Physical Attendance)

1. Registration policy applies the same statements as above.
2. Please ensure that registration is confirmed before attending the lecture.

General lecture policy

1. Doctor should sign for own CME.
2. Registration will cease when Q & A Session starts.
3. No recording unless permission is granted by the HKMA.
4. If doctor has attended CME Lecture in physical attendance and CME online at the same point of time, only CME Point(s) for the Lecture in physical attendance would be counted.
5. The HKMA will investigate when non-compliance at CME Session is reported, further action will be considered to ensure all CME activities are properly held.

Typhoon/Black Rainstorm/Extreme Conditions Policy

When Tropical Storm Warning Signal No. 8 (or above) or the Black Rainstorm signal or Extreme Conditions Warning Signal is hoisted within 3 hours of the commencement time, the relevant CME function will be cancelled. (i.e. CME starting at 2:00 pm will be cancelled if the warning signal is hoisted or in force any time between 11:00 am and 2:00 pm).

The function will proceed as scheduled if the signal is lowered three hours before the commencement time. (i.e. CME starting at 2:00 pm will proceed if the warning signal is lowered at 11:00 am, but will be cancelled even if it is lowered at 11:01 am).

When Tropical Storm Warning Signal No. 8 (or above) or Black Rainstorm signal or Extreme Conditions Warning Signal is hoisted after CME commencement, announcement will be made depending on the conditions as to whether the CME will be terminated earlier or be conducted until the end of the session.

The above are general guidelines only. Individuals should decide on their CME attendance according to their own transportation and work/home location considerations to ensure personal safety.

Contact

For enquiries, please contact the CME Department of the HKMA Secretariat at 2527-8452 or cme@hkma.org.



The Hong Kong Medical Association The HKMA Women's Health Campaign 2024 CME Symposium

Saturday, 23 March 2024



PROGRAMME	
1:00 – 2:00 p.m.	Registration & Lunch
2:00 – 2:40 p.m.	What is New in the 2024 HKCOG Guidelines for Cervical Cancer Prevention and Screening? Dr NGU, Siew Fei <i>Clinical Associate Professor, Department of Obstetrics and Gynaecology, School of Clinical Medicine, The University of Hong Kong</i>
2:40 – 3:20 p.m.	Why is Menopause a Public Health Problem? Prof Carmen WONG <i>Assistant Dean (Education), Faculty of Medicine, CUHK Associate Director, Office of Medical Education, CUHK, Director, CUHK Centre of Research and Promotion in Women's Health</i>
3:20 – 3:35 p.m.	Q&A session

Chairperson : **Dr LING, Siu Chi Tony**
*Hon. Secretary, The Hong Kong Medical Association
Specialist in Obstetrics and Gynaecology*

Venue : **Shantung Room, 8/F, Cordis Hotel,**
555 Shanghai Street, Mongkok, Kowloon

Capacity : **The capacity is 50. Registration is strictly required on a first-come, first served basis.**

Fee : **Free-of-charge**

Registration Deadline : **Thursday, 14 March 2024**

Registration : **Please register through**
<https://forms.gle/VvFbVxdiBcCsvsxY7>
or scan the QR code if you are interested to attend



CME Accreditation : **For Non-specialist Doctors: 2 CME points**
Accreditation for Specialist Doctors: Yes #
Accreditation from various colleges is pending.

Enquiry : **Please contact the HKMA CME Department at 2527 8452**
or email to cme@hkma.org.

Sponsors:



MSD



Roche



The HKMA CME Live Lecture in March 2024

All lectures start at 2:00-3:00 p.m.



	Date	Organiser and Topic	Speaker	CME Points	CME Accreditation from Colleges (Pending) #
1.	6 March 2024 (Wednesday)	The Hong Kong Medical Association Managing the Dilemma: Patients with IBS/FD/GERD Overlap <i>Sponsor: Abbott Laboratories Limited</i>	Dr CHAU, Wai Ming <i>Specialist in Gastroenterology & Hepatology</i>	1	Yes
2.	11 March 2024 (Monday)	The Hong Kong Medical Association Personalised Asthma Management with Once-Daily Single Inhaler Triple Therapy (SITT) <i>Sponsor: GlaxoSmithKline Limited</i>	Dr TAM, Chi Chun Terence <i>Specialist in Respiratory Medicine</i>	1	Yes
3.	15 March 2024 (Friday)	The Hong Kong Medical Association Non-invasive Tests for Prevention and Risk Reduction of Colonic Polyps and Colorectal Cancer - Recent Advancement and Case Sharing <i>Sponsor: G-NiiB, Genie Biome Limited</i>	Dr CHOW, Chi Wing <i>Specialist in Gastroenterology & Hepatology</i>	1	Yes
4.	18 March 2024 (Monday)	The Hong Kong Medical Association Non-Alcoholic Fatty Liver Disease: How Can We Do Better? <i>Sponsor: Abbott Laboratories Limited</i>	Dr SZE, Wan Chee <i>Specialist in Gastroenterology & Hepatology</i>	1	Yes
5.	20 March 2024 (Wednesday)	The Hong Kong Medical Association Intensive Cholesterol Lowering for Plaque Regression - The Journey to Reverse Atherosclerosis <i>Sponsor: Sanofi Hong Kong Limited</i>	Dr GOH, King Man Victor <i>Specialist in Cardiology</i>	1	Yes
6.	22 March 2024 (Friday)	The Hong Kong Medical Association Managing Common Urological Issues for Paediatric and Adult Patients <i>Sponsor: Synmosa Biopharma (HK) Co. Ltd</i>	Dr NGAN, Hin Kay John <i>Specialist in Urology</i>	1	Yes
7.	25 March 2024 (Monday)	The Hong Kong Medical Association Personalised Patient Care and Long Term Management of Endometriosis <i>Sponsor: Bayer HealthCare Limited</i>	Dr LUI, Kwai Ying <i>Specialist in Obstetrics & Gynaecology</i>	1	Yes
8.	27 March 2024 (Wednesday)	The Hong Kong Medical Association Breakthroughs from Gut and Skin Microbiome Analyses Drive Enhanced Eczema Management <i>Sponsor: G-NiiB, Genie Biome Limited</i>	Prof LEUNG, Ting Fan <i>Specialist in Paediatrics</i>	1	Yes



Please register through <https://forms.gle/qiwmsPVbiKo8DibQA> or scan the QR code if you are interested to attend. For enquiry, please contact the Secretariat at 2527 8285.

Accreditation from various colleges pending, for specialists, please complete the quiz online within two hours after the lecture with at least 50% correct for CME/ CPD points. For lecture without "Yes", CME Accreditation is for Non-Specialists Only. Non-Specialists doctors must complete lecture quiz (10 Q&A) and answer questions within two hours after the lecture with at least 50% correct.



The Hong Kong Medical Association District Health Network CME Programme in March 2024



Points to note for this CME Programme:

1. Enrolment for CME lecture with physical attendance mode will be given to the HKMA Members or medical practitioners in Hong Kong ONLY
2. For more details about the Policy for lecture in physical attendance mode, please refer to P. 15.
3. Registration is strictly required on a first-come, first-served basis.

CME PROGRAMME

	Date & Time	Lecture Details	Registration
1.	Tuesday, 12 March 2:00 – 3:00 pm	<p>Topic: Update in Management of Degenerative Spine</p> <p>Speaker: Dr LAM, Cheung Hing Eric <i>Specialist in Orthopaedics & Traumatology</i></p> <p>Venue: Ballroom III, 2/F, Courtyard by Marriott Hong Kong Sha Tin, 1 On Ping Street, Shatin, Hong Kong</p> <p><i>Sponsor: A. Menarini Hong Kong Limited</i></p>	<p>Registration Deadline: Tuesday, 5 March 2024</p>  <p>https://forms.gle/cxTeVUH8YE7898uj6</p>
2.	Thursday, 21 March 2:00 – 3:00 pm	<p>Topic: Differential Clinical Advantages of Antidepressant for Better Management of Depression</p> <p>Speaker: Dr WONG, Ka Yau Raymond <i>Specialist in Psychiatry</i></p> <p>Venue: The HKMA Wanchai Premises 5/F., Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong</p> <p><i>Sponsor: Servier Hong Kong Limited.</i></p>	<p>Registration Deadline: Thursday, 14 March 2024</p>  <p>https://forms.gle/zeWHAp6xuRtJurf46</p>
3.	Tuesday, 26 March 2:00 – 3:00 pm	<p>Topic: Influenza – The Latest Update</p> <p>Speaker: Dr LAM, Wilson <i>Specialist in Infectious Disease</i></p> <p>Venue: Diamond 3-6, 2/F, Crowne Plaza Hong Kong Kowloon East, 3 Tong Tak Street, Tseung Kwan O</p> <p><i>Sponsor: Sanofi Hong Kong Limited</i></p>	<p>Registration Deadline: Tuesday, 19 March 2024</p>  <p>https://forms.gle/nkvmSi6xwVV4TJ2G7</p>

CME Accreditation

: For Non-specialist Doctors: 1 CME point for each lecture.
Accreditation for Specialist Doctors: Yes #
 # Accreditation from various colleges is pending

Enquiry

: Please contact the HKMA DHN Department at 2861 1979
 or email to hkma_dhn@hkma.org.



The Hong Kong Medical Association and The Chinese University of Hong Kong Centre for Health Education and Health Promotion



LIVE

Date	Topic	Speaker
Thursday, 7 March 2024	Respiratory Syncytial Virus (RSV) Infections Amongst Infants: Burden, Risk Prevention Strategies and Management	Prof HON, Kam Lun Ellis <i>Professor of Practice in Paediatrics (by Courtesy), Department of Paediatrics, Faculty of Medicine, The Chinese University of Hong Kong</i>

Time: 2:00 – 2:45pm Lecture

2:45 – 3:00pm Q&A

Registration Deadline: Wednesday, 6 March 2024

Registration: Please register through
<https://forms.gle/AisdwAa8WW5NDuTs7>
 or scan the QR code if you are interested to attend.



CME Accreditation: For Non-specialist Doctors: 1 CME point.

Accreditation for Specialist Doctors: Yes#

Accreditation from various colleges are pending. For specialists who attended online, please completed the quiz online within two hours after the lecture with at least 50% correct for CME/CPD points. Non-Specialists doctors who attended online must also complete lecture quiz (10 Q&A) within two hours after the lecture with at least 50% correct.

Enquiry: Please contact the HKMA CME Department
 at 2527 8452 or email to cme@hkma.org.





HKMA-HKSH CME Programme 2023-2024



- Time** : 1:00 – 2:00pm Lunch
2:00 – 2:45pm Lecture
2:45 – 3:00pm Q&A
- Format** : Hybrid; ZOOM/
The HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building,
15 Hennessy Road, Wanchai, Hong Kong
- Fee** : Free-of-charge
- Capacity** : The capacity for physical attendance is 40. Registration for both physical attendance and virtual format are strictly required on a first-come, first-served basis.
- Registration Deadline** : Tuesday, 27 February 2024
- Registration** : [If you have already registered for this CME Programme, you are already registered for the whole Programme. You will receive the notification email 1 day and 1 hour before each lecture. Therefore, you are not advised to register the Programme repeatedly.]
- Please register through <https://forms.gle/vR61p9L8pffZLQ9SA> or scan the QR code if you are interested to attend.
- CME Accreditation** : For Non-specialist Doctors: 1 CME point for each lecture #
Accreditation for Specialist Doctors: Yes #
- # Accreditation from various colleges are pending. For specialists, please completed the quiz online within two hours after the lecture with at least 50% correct for CME/CPD points. Non-Specialists doctors must also complete lecture quiz (10 Q&A) within two hours after the lecture with at least 50% correct.
- Enquiry** : Please contact the HKMA CME Department at 2527 8452 or email to cme@hkma.org.



Date (Tuesday)	Topic	Speaker
5 March 2024	Pre-Eclampsia Screening in Pregnancy	Dr CHAN, Wan Pang Specialist in Obstetrics & Gynaecology
2 April 2024 to 3 September 2024	The remaining lectures shall be announced in coming CME Bulletin issues.	



HKMA-CUHK Medical Centre CME Programme 2024



- Time** : 1:00 – 2:00pm Lunch
2:00 – 2:45pm Lecture
2:45 – 3:00pm Q&A
- Format** : Hybrid; ZOOM/
The HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building,
15 Hennessy Road, Wanchai, Hong Kong
- Fee** : Free-of-charge
- Capacity** : The capacity for physical attendance is 40. Registration for both physical attendance and virtual format are strictly required on a first-come, first-served basis.
- Registration Deadline** : Wednesday, 6 March 2024
- Registration** : [If you have already registered for this CME Programme, you are already registered for the whole Programme. You will receive the notification email 1 day and 1 hour before each lecture. Therefore, you are not advised to register the Programme repeatedly.]
- Please register through <https://forms.gle/P5gtVQGcdeYM1oyr6>
or scan the QR code if you are interested to attend.
- CME Accreditation** : For Non-specialist Doctors: 1 CME point for each lecture #
Accreditation for Specialist Doctors: Yes #
- # Accreditation from various colleges are pending. For specialists, please completed the quiz online within two hours after the lecture with at least 50% correct for CME/CPD points. Non-Specialists doctors must also complete lecture quiz (10 Q&A) within two hours after the lecture with at least 50% correct.
- Enquiry** : Please contact the HKMA CME Department at 2527 8452
or email to cme@hkma.org.



Date (Wednesday)	Theme	Topic	Speaker
13 March 2024	Common Health Problems	Swallowing Disorder Amongst Elderly	Dr HO, Wan Sze Wency Specialist in Geriatric Medicine
10 April 2024		Open vs Endovenous Varicose Vein Surgery	Dr TONG, Wai Chung Specialist in General Surgery
8 May 2024	Men's Health	How Common is Male Infertility? What Can We Do About Them?	Dr CHUNG, Pui Wah Jacqueline Specialist in Obstetrics and Gynaecology
12 June 2024		Novel Treatment for BPH and Prostate Cancer	Dr CHIU, Ka Fung Peter Specialist in Urology
10 July 2024		Update on Anal Fistula	Dr NGO, Kwok Yu Specialist in General Surgery
14 August 2024	Putting Research Evidence Into Practice	Early Diagnosis and Treatment of Neurodegenerative Cognitive Disorders	Dr LAU, Yuk Lun Alexander Specialist in Neurology
11 September 2024		Advances in Management of Movement Disorder or Parkinsonism	Dr AU, Wing Chi Lisa Specialist in Neurology
16 October 2024		Lung Cancer Screening and Recent Advances in Lung Cancer Surgery	Dr SIHOE, Dart Loon Alan Specialist in Cardio-thoracic Surgery
13 November 2024		Recent Advances in Thrombectomy: New Hope for Major Stroke Patients	Dr TSAI, Siu Chun Specialist in Radiology
11 December 2024		Can Good Diabetes Care Prevent Osteoporosis and Fracture	Dr CHEUNG, Yun Ning Elaine Specialist in Endocrinology, Diabetes & Metabolism



HKMA-GHK CME Programme 2024



****New Programme****



- Time** : 1:00 - 2:00pm Lunch
2:00 - 2:45pm Lecture
2:45 - 3:00pm Q&A
- Format** : Hybrid; ZOOM/
The HKMA Wanchai Premises, 5/F, Duke of Windsor Social Service Building, 15 Hennessy Road, Wanchai, Hong Kong
- Fee** : Free-of-charge
- Capacity** : The capacity for physical attendance is 40. Registration for both physical attendance and virtual format are strictly required on a first-come, first-served basis.
- Registration Deadline** : Tuesday, 12 March 2024
- Registration** : Please register through
<https://forms.gle/bgZapxb18LaZ9xCU9>
or scan the QR code if you are interested to attend.
- CME Accreditation** : For Non-specialist Doctors: 1 CME point for each lecture #
Accreditation for Specialist Doctors: Yes #
- # Accreditation from various colleges are pending. For specialists, please completed the quiz online within two hours after the lecture with at least 50% correct for CME/CPD points. Non-Specialists doctors must also complete lecture quiz (10 Q&A) within two hours after the lecture with at least 50% correct.
- Enquiry** : Please contact the HKMA CME Department at 2527 8452
or email to cme@hkma.org.



Date (Tuesday)	Topic	Speaker
19 March 2024	Topic on Upper Gastrointestinal and Esophageal Surgery	Dr YAM, Po Chu Patricia <i>Specialist in General Surgery</i>
16 April 2024 to 17 December 2024		The remaining lectures shall be announced in coming CME Bulletin issues.



The Hong Kong Medical Association and Kowloon West Cluster of the Hospital Authority



LISTEN more: Webinar Series on Community Resources

聽多D：社區資源網上座談會系列

We are delighted to introduce you to a webinar series including four episodes on community resources which is co-organised by the Hong Kong Medical Association and the Kowloon West Cluster of the Hospital Authority in 2024. The video recordings of the webinars will be uploaded to the HKMA Website – CME Monthly Self-Study Webpage about 1 month after each episode. Members can review the videos within a designated period to obtain CME points.

Interest members, please scan the QR code or click this link
https://www.thkma.org/cme/continuous_medical_education/
within the below designated period for viewing.



Accreditation for Self-Study CME

For Non-specialist Doctors: 1 CME point per episode.

Should you have any enquiry, please contact the HKMA
CME Department at 2527 8452 or email to cme@hkma.org.

Self-Study
Video

PROGRAMME

Episode	Theme	Designated period for the Monthly Self-Study Video on the HKMA Website ^{##}		Remark (Webinar Video Period)
		Start Date	End Date	
1.	Overview of Long Term Care Services for Elderly in Hong Kong 安老服務全攻略	16 February 2024	15 March 2024	Jan 2024
2.	Care for the Carer in the Community 「照顧者」點做好？	16 May 2024	15 June 2024	Apr 2024
3.	Primary Health Care – It's Your Concern 基層醫療 – 關你事	16 August 2024	15 September 2024	Jul 2024
4.	Trends of Gerontechnology 樂齡科技新趨勢	16 November 2024	15 December 2024	Oct 2024

^{##} Dates are subject to change.

Disclaimer: All the webinars shall be recorded and managed by the Hong Kong Medical Association and the Kowloon West Cluster of the Hospital Authority after taking the final consent from each speaker.

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The Hong Kong Medical Association



Dr HO, Hok Kung Marco giving a CME lecture on 2 January 2024



Ms Mary LAU giving a CME Live lecture on 18 January 2024

The HKMA District Health Network CME Programme



Moderator Dr HO, Lap Yin (Left) presenting a souvenir to Speaker Dr TSUI, Tsun Miu (Right) on 23 January 2024



Moderator Dr CHENG, Chor Ho Alvin (Left) presenting a souvenir to Speaker Dr WONG, Cheuk Lik (Right) on 26 January 2024



Moderator Dr CHAN, Nim Tak Douglas (Right) presenting a souvenir to Speaker Prof WONG, Ka Sing Lawrence (Left) on 30 January 2024

The HKMA CME Bulletin Advertisement Rate Adjustment

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February 2024

28 February (Wed) 2:00-3:00 p.m.	The HKMA District Health Network The HKMA DHN CME Programme Updates on Lipid Management <i>HKMA CME Physical Lecture</i> HKMA District Health Network Dept. – Tel: 2861 1979	
29 February (Thu) 2:00-3:00 p.m.	The Hong Kong Medical Association and The Hong Kong Science and Technology Park HKMA-HKSTP CME Programme 2023 Therapeutic Strategies for Esophageal Squamous-Cell Carcinoma (ESCC) & Nasopharyngeal Cancer (NPC) and Potential Application of Patient-Derived Organoids <i>HKMA CME Hybrid Lecture</i> HKMA CME Dept. – Tel: 2527 8452	

March 2024

5 March (Tue) 2:00-3:00 p.m.	The Hong Kong Medical Association and The Hong Kong Sanatorium & Hospital HKMA-HKSH CME Programme 2023-2024 Pre-Eclampsia Screening in Pregnancy <i>HKMA CME Hybrid Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
6 March (Wed) 2:00-3:00 p.m.	The Hong Kong Medical Association Managing the Dilemma: Patients with IBS/FD/GERD Overlap <i>HKMA CME Live Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
7 March (Thu) 2:00-3:00 p.m.	The Hong Kong Medical Association and The Chinese University of Hong Kong Centre for Health Education and Health Promotion Respiratory Syncytial Virus (RSV) Infections Amongst Infants: Burden, Risk Prevention Strategies and Management <i>HKMA CME Live Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
11 March (Mon) 2:00-3:00 p.m.	The Hong Kong Medical Association Personalised Asthma Management with Once-Daily Single Inhaler Triple Therapy (SITT) <i>HKMA CME Live Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
12 March (Tue) 2:00-3:00 p.m.	The HKMA District Health Network The HKMA DHN CME Programme Update in Management of Degenerative Spine <i>HKMA CME Physical Lecture</i> HKMA District Health Network Dept. – Tel: 2861 1979	
13 March (Wed) 2:00-3:00 p.m.	The Hong Kong Medical Association and The CUHK Medical Centre HKMA-CUHK Medical Centre CME Programme 2024 Swallowing Disorder Amongst Elderly <i>HKMA CME Hybrid Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
15 March (Fri) 2:00-3:00 p.m.	The Hong Kong Medical Association Non-invasive Tests for Prevention and Risk Reduction of Colonic Polyps and Colorectal Cancer – Recent Advancement and Case Sharing <i>HKMA CME Live Lecture</i> HKMA CME Dept. – Tel: 2527 8452	

16 March (Sat) 12:00-4:35 p.m.	The Hong Kong Society for Infectious Diseases 27th Annual Scientific Meeting of The Hong Kong Society for Infectious Diseases Venue: Regency Ballroom, Lobby Level, Hyatt Regency Hong Kong, 19 Hanoi Road, Tsimshatsui, Kowloon Detail: https://www.hksid.org/event/hksid-the-27th-annual-scientific-meeting/ For inquiry, please contact the Meeting Secretariat (tel: 2155 8557 or email: mandy.choi@mims.com)	
18 March (Mon) 2:00-3:00 p.m.	The Hong Kong Medical Association Non-Alcoholic Fatty Liver Disease: How Can We Do Better? <i>HKMA CME Live Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
19 March (Tue) 2:00-3:00 p.m.	The Hong Kong Medical Association and The Hong Kong Gleneagles Hospital HKMA-GHK CME Programme 2024 Topic on Upper Gastrointestinal and Esophageal Surgery <i>HKMA CME Hybrid Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
20 March (Wed) 2:00-3:00 p.m.	The Hong Kong Medical Association Intensive Cholesterol Lowering for Plaque Regression – The Journey to Reverse Atherosclerosis <i>HKMA CME Live Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
21 March (Thu) 2:00-3:00 p.m.	The HKMA District Health Network The HKMA DHN CME Programme Differential Clinical Advantages of Antidepressant for Better Management of Depression <i>HKMA CME Physical Lecture</i> HKMA District Health Network Dept. – Tel: 2861 1979	
22 March (Fri) 2:00-3:00 p.m.	The Hong Kong Medical Association Managing Common Urological Issues for Paediatric and Adult Patients <i>HKMA CME Live Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
23 March (Sat) 2:00 – 3:35 p.m.	The Hong Kong Medical Association The HKMA Women's Health Campaign 2024 Lecture1: What is New in the 2024 HKCOG Guidelines for Cervical Cancer Prevention and Screening? Lecture 2: Why is Menopause a Public Health Problem? <i>HKMA CME Physical Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
25 March (Mon) 2:00-3:00 p.m.	The Hong Kong Medical Association Personalised Patient Care and Long Term Management of Endometriosis <i>HKMA CME Live Lecture</i> HKMA CME Dept. – Tel: 2527 8452	
26 March (Tue) 2:00-3:00 p.m.	The HKMA District Health Network The HKMA DHN CME Programme Influenza – The Latest Update <i>HKMA CME Physical Lecture</i> HKMA District Health Network Dept. – Tel: 2861 1979	
27 March (Wed) 2:00-3:00 p.m.	The Hong Kong Medical Association Breakthroughs from Gut and Skin Microbiome Analyses Drive Enhanced Eczema Management <i>HKMA CME Live Lecture</i> HKMA CME Dept. – Tel: 2527 8452	