### CONCLUSION

This is a case of uterine clear cell carcinoma arising from endometriosis complicated with hypercalcemia and highlights that hypercalcemia may be the sole sign of disease transformation, despite the well-established aggressive nature of the disease. It is then crucial to perform a timely and thorough assessment, followed by appropriate management.

## EP_A085

## A GIANT PARATHYROID ADENOMA

https://doi.org/10.15605/jafes.039.S1.096

**Meng Loong Mok,[1] Tharsini Sarvanandan,[1] Senthila Madiwana,[1] Wei Kei Wong,[1] Quan Hziung Lim,[1] Ying Guat Ooi,[1] Nicholas Ken Yoong Hee,[1] Sharmila Sunita Paramasivam,[1] Jeyakantha Ratnasingam,[1] Shireene Ratna Vethakkan,[1] Lee-Ling Lim[1,2,3]**

*[1]Department of Medicine, Faculty of Medicine, Universiti Malaya, Kuala Lumpur, Malaysia*
*[2]Department of Medicine and Therapeutics, The Chinese University of Hong Kong, Hong Kong SAR, China*
*[3]Asia Diabetes Foundation, Hong Kong SAR, China*

### INTRODUCTION/BACKGROUND

Giant parathyroid adenomas, defined as adenomas weighing >3.5 gm, are rare, comprising a small fraction of all parathyroid adenomas. We describe a patient who presented with a giant parathyroid adenoma and markedly elevated parathyroid hormone.

### CASE

A 57-year-old male, with a family history of adrenal Cushing's syndrome and hyperthyroidism, was incidentally diagnosed with primary hyperparathyroidism during admission for cerebral infarction, with hypercalcemia (3.2 mmol/L), elevated intact parathyroid hormone (iPTH) (140.2 pmol/L), and vitamin D deficiency (46 nmol/L). He was treated with saline diuresis, subcutaneous denosumab 60 mg, and subcutaneous calcitonin 200 U BD, but defaulted to further workup.

Nine months later, he returned with altered sensorium, hypercalcemia (3.43 mmol/L) and elevated iPTH (448.9 pmol/L), the same treatment was given as in the previous admission. Ultrasound of the parathyroid showed an interior hypoechoic lesion measuring 2.0 x 2.6 x 3.2 cm. Tc-99m Sestamibi scan suggested a left inferior parathyroid lesion without an ectopic tissue. DXA scan showed osteoporotic changes in the distal third radius and femoral neck. KUB Ultrasound showed no renal calculi. One month later he was admitted for hypercalcemia and acute kidney injury, treated with saline diuresis and subcutaneous denosumab 120 mg, and eventually underwent left inferior parathyroidectomy with intraoperative iPTH monitoring. From his highest pre-operative iPTH at 828 pmol/L, a reduction to 236.7 pmol/L was seen at 10-minutes post-incision. Intra-op findings showed a large left inferior parathyroid tumour, measuring 3.5 x 2.7 x 2.0 cm, weighing 14 gm. Histopathology was consistent with parathyroid adenoma. He was started on calcitriol and calcium carbonate post-operatively and did not develop hungry bone syndrome.

### CONCLUSION

In giant parathyroid adenomas, a disproportionate rise in serum iPTH may result from factors like vitamin D deficiency, chronic iPTH elevation, or resistance to physiological effects of PTH. Distinguishing them from parathyroid carcinoma is challenging due to shared high iPTH and calcium levels, though studies showed that giant parathyroid adenomas may be asymptomatic. Histopathological examination is essential for diagnosis, warranting early surgical removal.

## EP_A086

## BONE HEALTH ASSESSMENT AMONG PROSTATE CANCER PATIENTS TREATED WITH ANDROGEN DEPRIVATION THERAPY IN A TERTIARY CENTRE IN MALAYSIA

https://doi.org/10.15605/jafes.039.S1.097

**Tan Ying Jie,[1] Ch'ng Ling Sing,[2] Lee Fei Yee,[3] Noor Rafhati Adyani Abdullah[1]**

*[1]Endocrinology Unit, Department of Internal Medicine, Hospital Sultanah Bahiyah, Malaysia*
*[2]Urology Unit, Department of Internal Medicine, Hospital Sultanah Bahiyah, Malaysia*
*[3]Clinical Research Centre, Hospital Selayang, Malaysia*

### INTRODUCTION/BACKGROUND

Androgen deprivation therapy (ADT) is the cornerstone of treatment for castration-sensitive Prostate Cancer (PCa). However, the use of ADT can negatively impact bone health. This study aims to assess the prevalence of osteoporosis and osteopenia in men with PCa who have undergone ADT and identify any potential factors associated with osteoporosis among this population.

### METHODOLOGY

This single-centre, cross-sectional study recruited 107 PCa patients treated with ADT at the Urology Unit, Hospital Sultanah Bahiyah from January 2020 to August 2023. Data collected included socio-demographics, comorbidities, treatment details and FRAX scores. Patients underwent Dual-energy X-ray absorptiometry (DEXA) scans and blood

investigations including renal and liver function, serum calcium, vitamin D, testosterone and oestradiol levels. Osteoporosis-associated factors were identified using logistic regression and adjusted with confounders.

**RESULTS**

Our patients had a mean age of 73.1 years old (SD 7.2), with 62.6% being Malay (n = 67) and a mean BMI of 24.96 (SD 4.31). Among PCa patients treated with ADT, the prevalence of osteoporosis was 57.9% (n = 62), osteopenia was present in 39.3% (n = 42), and only 2.8% (n = 3) had normal bone mineral density. The most vulnerable site was the 1/3 radius with the highest osteoporosis prevalence of 43% (n = 46), followed by femoral neck at 29% (n = 31), lumbar spine at 22.4% (n = 23), and total hip at 11.2% (n = 12). Several predictive factors of osteoporosis were identified, including the absence of calcitriol usage (Adjusted Odd Ratio (AOR) = 5.07, CI 1.04-24.75, $p = 0.04$), duration of ADT (AOR = 1.02, CI 1.0-1.04, $p = 0.03$), and ongoing ADT (AOR = 5.08, CI 1.169-22.09, $p = 0.03$). In contrast, a higher weight conferred a lower risk for osteoporosis (AOR = 0.957, CI 0.92-0.99, $p = 0.01$).

**CONCLUSION**

This study highlights the importance of screening for osteoporosis in men who are undergoing ADT for PCa. Peripheral BMD is an effective tool to assess their bone health. Various risk factors, such as being underweight, not receiving calcitriol, continuous ADT, and longer treatment duration, can increase the likelihood of osteoporosis.

## EP_A087

### A RARE CASE OF RECURRENT PARATHYROID CARCINOMA

https://doi.org/10.15605/jafes.039.S1.098

**Shangari Kaliappan, Yi Jiang Chua, Syahrizan Samsuddin**

*Endocrine Unit, Internal Medicine Department, Hospital Sultan Idris Shah (HSIS), Serdang, Malaysia*

**INTRODUCTION/BACKGROUND**

One of the rare causes of primary hyperparathyroidism is parathyroid cancer. It is usually diagnosed post-operatively with histopathology. Surgery is always definitive in parathyroid carcinoma, but there have been reported recurrences of parathyroid cancer up to 20 years after a successful surgery. We report a case of a 61-year-old male who had bilateral inferior parathyroid carcinoma, surgically cured in 2020, but had a recurrence of parathyroid carcinoma after 3 years.

**CASE**

A 54-year-old male presented with headaches and dizziness and was suspected of having had a stroke. Further investigations revealed that the patient had primary hyperparathyroidism, with a corrected calcium level of 3.56 mmol/L (normal range 2.1-2.55), a phosphate level of 0.93 mmol/L (normal range 0.74–1.52), and an iPTH level of 148.28 pmol/L (normal range 1.59–7.24). Thyroid ultrasound detected a bilateral enlarged inferior parathyroid gland measuring 1.5 x 1.3 cm and 1.6 x 1.3 cm, and a SESTAMIBI scan confirmed the presence of parathyroid hormone hypersecretion. He underwent a successful bilateral inferior parathyroidectomy, and a histopathological examination revealed parathyroid carcinoma. He remained normocalcaemic, but his iPTH levels increased with time, from 12.05 pmol/L to 30.23 pmol/L. A subsequent ultrasound of the thyroid showed a tiny extra-thyroidal lesion adjacent to the left internal jugular vein, and a repeat SESTAMIBI scan revealed concordant parathyroid hypersecretion over the left superior thyroid gland. However, a neck CT scan failed to locate the lesion. Parathyroid carcinoma is commonly related to Multiple Endocrine Neoplasia (MEN Syndrome) and familial isolated hyperparathyroidism. 4D CT, MRI, and hybrids of SESTAMIBI and CT/MRI enable more precise localization of ectopic disease glands.

**CONCLUSION**

It is important to have lifetime surveillance for parathyroid carcinoma survivors, as the recurrence rate is high despite surgery, with a mean survival of 6-7 years.

## EP_A088

### 25 HYDROXY-VITAMIN-D LEVEL INVESTIGATION AND MANAGEMENT: CLINICAL AUDIT IN A TERTIARY HOSPITAL IN CENTRAL PAHANG, MALAYSIA

https://doi.org/10.15605/jafes.039.S1.099

**Hwai Jing Eng, Shudim Saiful Shahrizal, Chee Keong See**

*Endocrine Unit, Department of Medicine, Hospital Sultan Haji Ahmad Shah, Temerloh, Malaysia*

**INTRODUCTION/BACKGROUND**

The prevalence of vitamin D deficiency in Malaysia in different populations has been quoted to be between 20 to 90%. Adequate vitamin D in food sources, sun exposure, or supplementation are preventative measures for vitamin D deficiency. Vitamin D level screening is limited by resources in government hospitals and targeted screening in high-risk patients are performed. This study was conducted to ascertain the practice of 25-hydroxyvitamin D screening and management of vitamin D deficiency.