and vitamin D supplements. However, subsequent follow-ups indicated non-union of the fracture with early avascular necrosis, necessitating referral to the arthroplasty team for further management.

CONCLUSION

This case underscores the importance of considering osteoporosis during pregnancy, especially among patients with comorbidities such as diabetes mellitus. Early recognition and adequate supplementations are paramount to mitigate complication of fracture.

EP_A104

THE DOUBLE-EDGED SWORD - SEVERE HYPOPHOSPHATEMIA POST INTRAVENOUS BISPHOSPHANATE FOR SEVERE REFRACTORY HYPERTHYROID-INDUCED HYPERCALCEMIA: A CASE REPORT

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INTRODUCTION/BACKGROUND

Severe hypophosphatemia, defined as serum phosphate levels of <1 mg/dl (0.32 mmol/L), after intravenous bisphosphonate is a rare occurrence. It can lead to rhabdomyolysis, respiratory failure, convulsions and arrhythmias if not detected and treated early. Few reported cases of bisphosphonate-induced hypophosphatemia are related to malignancy-induced hypercalcemia or osteoporosis treatment. We present a case of severe hypophosphatemia post intravenous zoledronic acid for hyperthyroid-induced refractory severe hypercalcemia.

CASE

A 62-year-old female presented with thyrotoxicosis (weight loss, palpitation, heat intolerance) for 5 months. On physical examination, she had hand tremors, proximal myopathy and tachycardia with multinodular goitre. Other systemic examinations were normal.

She was biochemically hyperthyroid (TSH: <0.01 m IU/L, FT: 467 pmol/L). Serum PTH was suppressed (0.59 mmol/L). Initial corrected calcium was 3.5 mmol/L with phosphate of 0.72 mmol/L. Intravenous zoledronic acid 4 mg was administered as she did not respond to hyperhydration. After 48-hours, repeat serum phosphate was 0.22 mmol/L with low calculated renal-tubular-reabsorption-of-phosphate (TMP/GFR) [0.41 mmol/L] indicating renal phosphate wasting. Repeat serum PTH level was normal (4.35 mmol/L), corrected calcium was 2.01 mmol/L with low 25-OH vitamin D level (<7.5 nmol/L). A CT TAP done showed no evidence of malignancy. All her tumour markers were negative. Biopsy of thyroid nodules were negative for malignancy.

CONCLUSION

Based on previous case reports, bisphosphonate-induced hypophosphatemia is postulated to be a result of secondary hyperparathyroidism (drug-induced) causing severe hypophosphatemia through renal-phosphate wasting. One of the risk factors that can precipitate this is vitamin D deficiency. In our case, the slightly elevated PTH level post bisphosphonate coupled with reduced TMP/GFR level support the diagnosis of bisphosphonate-induced severe hypophosphatemia. Removal of the offending drug is the mainstay of treatment in drug-induced hypophosphatemia. Asymptomatic, mild to moderate hypophosphatemia is being treated with oral phosphate whereas severe symptomatic hypophosphatemia is being given intravenous phosphate. It may also be prevented with vitamin D and calcium supplements.

EP_A105

OSTEOPOROSIS TREATMENT WITH BISPHOSPHONATE THERAPY: A CLINICAL AUDIT

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INTRODUCTION/BACKGROUND

Osteoporosis is a progressive and debilitating bone disease with compromised bone strength leading to fragility fractures. Bisphosphonate is the predominant treatment for osteoporosis with an overall positive risk-benefit ratio. Pre-treatment counselling and standardized practice in prescribing bisphosphonate is important to ensure safety during treatment.

METHODOLOGY

This clinical audit was conducted to assess the practice of bisphosphonate prescription and pre-treatment counselling and assessment. All patients with osteoporosis and on active bisphosphonate treatment in Hospital Sultan Haji Ahmad, Temerloh, Central Pahang from August 2023 to January 2024 were included in the audit. Electronic medical records were assessed for demographic data, pre-treatment screening, DEXA scan investigations, pre-treatment counselling documentation, dental screening and secondary osteoporosis screening.

RESULTS
A total of 130 patients (86% females) were on active bisphosphonate treatment. Of these, 48 (36.9%) patients were from 70-79 years of age. Majority of the treatment was initiated by orthopaedic surgeons (63.8%) and endocrinologists (15.4%). Fragility fracture was the most common indication for bisphosphonate therapy in 56.9%. The most prevalent risk factors for osteoporosis were postmenopausal (80.7%), followed by prolonged steroid use (18.5%) and other endocrine disorders (11.5%). Only 35.3% (n=48) had bone mineral densitometry done prior to initiation of treatment. Less than 10% of patients had documented fracture risk assessment with FRAX. About 40% of patients had no baseline renal function prior to initiation of treatment. Referral for dental screening was not documented in 48.5% of patients. There was also a lack of counselling and documentation prior to the initiation of treatment. Majority of patients (86.9%) received vitamin D and calcium supplementation with bisphosphonate therapy.

CONCLUSION
A standardized osteoporosis pre-treatment checklist is required to ensure good and safe practice of treatment. Awareness and appropriate counselling among patients with osteoporosis on bisphosphonate treatment needs to be improved.

EP_A106

CASE REPORTS OF PRIMARY HYPERPARATHYROIDISM IN PREGNANCY

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Primary hyperparathyroidism (PHPT) during pregnancy is uncommon. Early detection is crucial due to its association with increased maternal and foetal morbidity and mortality. Diagnosis is challenging and requires high clinical suspicion due to nonspecific presentation and the overlap of symptoms of hypercalcemia with those of pregnancy. Furthermore, serum calcium is not routinely tested antenatally. The interpretation of serum calcium and parathyroid hormone levels differs significantly from that in nonpregnant patients due to physiological changes during pregnancy. Preoperative localisation and treatment options are limited due to uncertainties regarding safety in pregnancy. We present 2 cases of PHPT who underwent parathyroidectomy during pregnancy.

We retrospectively reviewed PHPT cases in Hospital Pulau Pinang from 2020 to 2023. Patients were identified from the laboratory database and clinical details were obtained from their medical records.

CASE
Two patients, with mean age of 34 years, were diagnosed with PHPT pre-pregnancy. The first patient was diagnosed with PHPT during routine blood testing for chronic myeloid leukaemia follow-up. She had left inferior parathyroidectomy and yet her post-operative serum calcium was persistently elevated. Repeated Tc99m sestamibi showed 2 foci of increased tracer uptake. During scheduled clinic visit, she informed us of her pregnancy. Exploratory parathyroidectomy was scheduled. The second patient was diagnosed with PHPT when she was admitted for acute pancreatitis. She was found to be pregnant when she was re-admitted for another episode of acute pancreatitis. Emergency parathyroidectomy was arranged due to persistent hypercalcemia despite on rehydration. Postoperatively, both were discharged with normalization of serum calcium level. However, the first patient had complete miscarriage in the second trimester; the second patient developed preeclampsia and delivered a preterm baby at 34 weeks.

CONCLUSION
Early parathyroidectomy in PHPT patients diagnosed at child-bearing age helps to prevent complications during pregnancy.

EP_A107

PITUITARY GLAND METASTASIS OF BREAST CANCER PRESENTING AS DIABETES INSIPIDUS

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INTRODUCTION/BACKGROUND
Metastasis to the pituitary gland is extremely rare and represents only 1% of pituitary tumours. The most frequently reported malignancies that metastasize to the pituitary gland are lung, renal and breast cancers.

CASE
A 49-year-old female with advanced left breast carcinoma with bone metastasis presented with a week's history of worsening back pain and bilateral lower limb weakness. On examination, vital signs were stable and neurological examination showed bilateral lower limb motor neuron lesions with muscle strength of 3/5 and loss of sensation