

She underwent multiple imaging studies for parathyroid adenoma localization, including parathyroid ultrasound and subsequent sestamibi scan, which showed no evidence of hyperfunctioning parathyroid tissue. A computed tomography scan using a parathyroid protocol did not demonstrate any parathyroid adenoma. After multiple hypercalcaemic crises requiring IV bisphosphonates, oral cinacalcet 50 mg twice daily was initiated to control her hypercalcaemia. However, her calcium levels remained elevated, leading to the decision to do bilateral neck exploration (BNE) due to failed multimodal localization studies. Calcitonin (total dosing of 300 units) was administered preoperatively to optimize calcium levels. Intraoperatively, the right superior and left inferior parathyroid glands were removed, preserving only the right inferior parathyroid gland. The left superior parathyroid gland was not visualized. Intraoperative iPTH was not available in our setting. Histopathological examination revealed a right superior parathyroid adenoma and left inferior gland hyperplasia. Postoperatively, she transiently required calcium infusion and was discharged with oral calcium and vitamin D supplementation. Preoperatively, serum intact PTH was 167 pg/mL (NR 14.9-56.9), which decreased to 16.8 pg/mL one month postoperatively, indicating successful removal of the target adenoma.

#### CONCLUSION

In cases of failed localization in PHPT, recognizing MGD is crucial. BNE may yield higher cure rates compared to minimally invasive parathyroidectomy, which require two concordant imaging studies. Preoperative calcium optimization is essential for minimizing intraoperative complications and the risk of postoperative hungry bone syndrome.

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### CLINICAL AUDIT ON BONE MINERAL DENSITY (BMD) CONDUCTED IN SERDANG HOSPITAL IN THE YEAR 2023

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#### INTRODUCTION/BACKGROUND

BMD measurement using dual-energy x-ray absorptiometry (DXA) remains the gold standard for the diagnosis of osteoporosis. This non-invasive, radiographic test is a

convenient tool that guides physicians when to initiate osteoporotic therapy, especially among the elderly population without fragility fracture.

#### METHODOLOGY

We conducted a cross-sectional audit on all the BMDs conducted in the year 2023 at HSIS, to study the bio-demographics of the patients, severity of BMDs and adequacy of treatment initiated. In this clinical audit, all BMDs were extracted from the electronic medical record (EMR). Medications and bio-demographics of the patients were extracted from the EMR to calculate the FRAX score.

#### RESULTS

A total of 473 BMD reports were interpreted. The mean age of the patients was 65.5 (13.4) years while the mean BMI was 25.3 (5.4) kg/m<sup>2</sup>. About 89% of patients were female and 11% were male. According to ethnicity, the majority were Chinese (47.4%), followed by Malay (34.7%) and Indian (17.3%). A total of 168 (35.5%) patients who had BMD had a fragility fracture but only 76.2% were treated with anti-osteoporotic agents. Majority of the requests for BMD were from the Orthopaedics Department (57.7%) followed by Rheumatology Unit (23.5%) and Endocrinology Unit (3.6%). About 64.1% (n=303) of patients qualify for anti-osteoporotic treatment due to a fragility fracture, a T score  $\leq -2.5$  or osteopenia with FRAX score warranting treatment. However, only 198 (65.3%) were started on anti-osteoporotic treatment. In 165 patients with severe osteoporosis (T score  $\leq -3.0$ ), only 127 (77%) were started on treatment, and only 2 of them (1.2%) were started on anabolic agents.

#### CONCLUSION

Lack of screening, awareness and inadequate funding for anti-osteoporotic treatment were the main contributing factors for delay in treatment or initiation of less potent agents among patients with osteoporosis.