Hypercalcaemia was unmasked later in this case upon the resolution of the above-mentioned conditions. During pregnancy, surgery is the treatment of choice during the second trimester in cases of severe hypercalcemia (calcium >3.0 mmol/L) because medical therapy options are unsafe.

EP_A039

A CHALLENGING CASE OF FAMILIAL HYPOCALCIURIC HYPERCALCEMIA CONCEALED BY CONCOMITANT VITAMIN D DEFICIENCY AND PAPILLARY THYROID CARCINOMA

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INTRODUCTION/BACKGROUND
Familial hypocalciuric hypercalcemia (FHH) is a rare autosomal-dominant disorder resulting from an inactivating mutation in the calcium-sensing receptor (CASR) gene. It is generally benign and characterized by longstanding parathyroid hormone (PTH) - dependent hypercalcemia. Resection of the parathyroid tissue does not normalize serum calcium.

CASE
We report a case of FHH with evaluation confounded by vitamin D deficiency and newly diagnosed papillary thyroid carcinoma.

A 63-year-old female was incidentally noted to have hypercalcemia with elevated PTH during admission for pneumonia. She had completed antituberculosis therapy for gastrointestinal tuberculosis 2 years ago. The baseline vitamin D level was 24nmol/L (NV: 75-100), and the 24-hour urine calcium creatinine ratio was 0.01. Bone mineral density revealed an osteopenic spine. Focused parathyroidectomy was performed after technetium (99mTc) sestamibi SPECT scan which revealed a left superior parathyroid adenoma. However, the calcium levels remained elevated. Histopathological examination of the postoperative sample revealed a metastatic papillary thyroid carcinoma in the lymph node. Hence, she underwent total thyroidectomy, left modified neck dissection, and total parathyroidectomy with auto-transplantation of parathyroid tissue into the presternal space. Albeit that, the serum calcium and PTH remained elevated. PTH-related protein (PTHrP) and 1,25 hydroxy vitamin D levels were within normal range. Opportunistic screening of her daughter revealed that she had raised calcium levels with inappropriately normal PTH and 24-hour urinary calcium creatinine ratio of less than 0.01. The patient's repeated 24-hour urinary calcium creatinine ratio after repletion of vitamin D was also less than 0.01. We diagnosed her with FHH based on positive family screening and longstanding asymptomatic PTH-dependent hypercalcemia refractory to parathyroidectomy.

CONCLUSION
Our case highlights the diagnostic dilemmas in hypercalcemia, the importance of screening family members and the repetition of 24-hour urine calcium creatinine ratio after correction of vitamin D deficiency.

EP_A040

TERIPARATIDE [HUMAN PARATHYROID HORMONE (PTH) 1-34] FOR THE MANAGEMENT OF POST-THYROIDECTOMY HYPOCALCEMIA EXACERBATED BY CHYLE LEAK

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INTRODUCTION/BACKGROUND
Hypocalcaemia secondary to hypoparathyroidism is a common complication of thyroidectomy. Another less common but serious complication is chyle leak which may also lead to electrolyte abnormalities, including hypocalcaemia. We report a case of refractory hypocalcaemia following thyroidectomy complicated by chyle leak which was successfully managed with teriparatide.

CASE
A 37-year-old male had undergone total thyroidectomy with central and left lateral neck dissection for papillary thyroid carcinoma. After the surgery, up to 200 cc/day of milky fluid were noted in his neck drain. Biochemical analysis showed high triglyceride content (2.3 mmol/L), consistent with chyle. He was initially treated conservatively with total parenteral nutrition, pressure dressing and subcutaneous octreotide.

On postoperative day (POD) 3, he had symptomatic hypocalcaemia (corrected calcium 1.95 mmol/L). PTH was undetectable (<0.5 pmol/L). However, despite intravenous calcium gluconate infusion, high doses of activated vitamin D and calcium supplements (calcitriol 4.5 mcg/day, alphacalcidol 2 mcg/day and calcium carbonate 6 g/day), his calcium level remained as low as 1.9 mmol/L by POD

10. Subcutaneous teriparatide was then started, titrated up to 20 mcg, bid. This stabilized his corrected calcium at 2.1 mmol/L.

On POD 16, the chyle leak was successfully sealed surgically. By POD 19, his calcium level improved to 2.34 mol/L. Subcutaneous teriparatide was discontinued after a course of 14 days. To date, 5 months after his surgery, he is normocalcaemic while on alphacalcidol 2.5 mcg/day and calcium carbonate 3 g/day. His PTH remains undetectable.

Chyle leak occurs in 0.5-1.4% of thyroidectomies and 2-8% of neck dissections. As the thoracic duct ends at the junction of the left subclavian and jugular veins, most chyle leaks occur following left neck dissection. About 70% of chyle consist of dietary fats. Hence, asides from calcium, chyle leak also results in loss of dietary fat-soluble vitamins, including vitamin D.

CONCLUSION
Post-thyroidectomy hypocalcaemia due to hypoparathyroidism can be exacerbated by chyle leak, thus necessitating use of parenteral therapy with teriparatide.

EP_A041

OSTEOMALACIA SECONDARY TO RENAL TUBULAR ACIDOSIS TYPE 1 WITH VITAMIN D DEFICIENCY

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INTRODUCTION/BACKGROUND
Osteomalacia is a disease of inadequate bone mineralization. The true incidence of osteomalacia is largely underestimated. Patients may develop bone pain, muscle weakness and fractures and in severe untreated cases may become bed-bound. Osteomalacia is known to be associated with RTA types 1 and 2.

CASE
We report a 41-year-old female with RTA type 1 who had presented to us after applying for disability pension. She has been having muscle weakness and bone pain which progressed to gait abnormalities and had become bedridden and dependent on activities of daily living. She previously defaulted all her follow-ups and was found to have severe vitamin D deficiency with untreated acidosis. Neuromuscular dystrophy was excluded. Her initial BMD showed a hip Z-score of -3.9 and T-score of -4.0 (April 2019). She was treated with vitamin D_3 7,000 units/day (50,000 units weekly), calcium lactate 300 mg od and Shol's solution 20 ml qid. Subsequent follow up showed gradual improvement in muscle strength with normalized BMD within 3 years and resulting in patient being independent.

CONCLUSION
We report the successful recognition and management of osteomalacia with RTA type 1 and Vitamin D deficiency.

EP_A042

A RARE CASE OF PREGNANCY LACTATION-INDUCED OSTEOPOROSIS

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INTRODUCTION/BACKGROUND
Pregnancy and lactation-induced osteoporosis (PLO) is a rare condition occurring for the first time in pregnancy or postpartum period while breastfeeding. Here, we report a rare case of PLO which presented during postpartum of first pregnancy.

CASE
A 27-year-old female presented with low back pain 4 months postpartum of her first pregnancy and worsening during her second pregnancy. It was associated with kyphotic lordosis. PLO was diagnosed based on clinical symptoms and low bone mineral density (BMD).

CONCLUSION
PLO should be considered in patients who complain of back pain during late pregnancy and postpartum period. Weaning off breastfeeding and supplementation of calcium/vitamin D should be the first recommendation as conventional treatment after the diagnosis of PLO. Bisphosphonate, teriparatide and denosumab can be added on as specific pharmacological therapy if conservative treatment fails.