

A peculiar case of nutritional osteomalacia in a tropical country

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INTRODUCTION:

Osteomalacia is a metabolic bone disease characterized by impaired bone mineralization. Osteomalacia, however, remains largely underestimated across the globe. We reported a case of osteomalacia with a proximal femur fracture.

REPORT:

A 61-year-old female with underlying hypertension was brought to the emergency department due to the right lower limb pain for one week. She was ambulating via wheelchair last week and denied any trauma. She denied taking any traditional medication, bisphosphonates or steroids.

On examination, the patient has tenderness over the right hip and is unable to move the right hip. X-ray noted a right subtrochanteric femur fracture and a left unicortical subtrochanteric fracture.

Blood investigation revealed an increased level of PTH and reduced calcium and phosphate levels.

DISCUSSION

Osteomalacia is the least common among metabolic bone diseases with known pathogenic mechanisms. Nevertheless, osteomalacia occurs with regular frequency. Due to its indefinite vague symptoms, it may escape recognition, especially in the early stages.

Vitamin D deficiency is the most common cause worldwide. As Malaysia lies in the equator region, we obtain adequate sunlight exposure for the endogenous synthesis of vitamin D through the skin. It was found that sunlight avoidance practices were found to be prominent among Malaysians.

Our patient had typical features.

Characteristic radiological features of osteomalacia include Looser zones, which represent insufficiency-type fractures.

We proceeded with cephalomedullary nail fixation

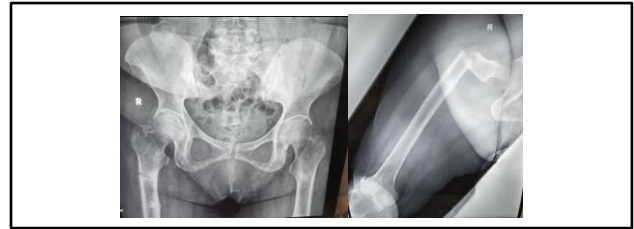


Figure 1: Pelvic x-ray showing looser zone

Blood investigation	results	Normal value
Total 25-hydroxy vitamin D	65.73	76-250nmol/L
PTH	10.28	1.59-7.24 pmol/L
Calcium	2.4	2.2-2.7mmol/l
Phosphorus	0.68	0.74-1.52mmol/l

Figure 2: blood investigation

CONCLUSION:

Even though Malaysia is a tropical country, the population still suffers from vitamin D deficiency. This finding is consistent with research from other countries.

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