

HOLLISTIC APPROACH IN MANAGING FRACTURE IN HYPERPARATHYROIDISM END STAGE RENAL DISEASE PATIENT

¹Hilmi P, ¹Afandi J, ²Ngiam CJ, ²Kamalruzaman MA
ORTHOPAEDIC DEPARTMENT, HOSPITAL ENCHE BESAR HAJJAH KHALSOM, KLUANG, JOHOR

INTRODUCTION:

Abnormalities in calcium, phosphorous, and parathyroid hormone (PTH), hallmarks of the condition known as chronic kidney disease – mineral and bone disorder (CKD-MBD), are associated with adverse outcomes in patients receiving maintenance dialysis. Patients with end-stage renal disease (ESRD) are at increased risk for bone loss and are susceptible to fractures, especially hip fractures.¹

REPORT:

A 43 years old female with history of ESRD on regular hemodialysis, presented to the hospital with complain of right hip pain and unable to ambulate post alleged fall at her home. Radiological imaging show right base neck of femur fracture. Blood investigation show hypercalcemia, hyperphosphatemia, and hyperparathyroidism. Done open reduction and internal fixation however abandoned due to poor bone quality.

Patient then proceeded with total parathyroidectomy, hemithyroidectomy and conservative management of fracture with casting. Follow-up x-rays showed callus formation and reduction in bone resorption. Patient was able to weight bear by the 6th month with limb length discrepancy of 2cm over the affected limb.



Figure 1: posttrauma day 1, showing osteopenic bone with neck of femur fracture Garden 3

Figure 2: posttrauma 1 month show further resorption over fracture site and new fracture over subtrochanteric region

Figure 3: posttrauma 6 month show callus and increasing bone density.

CONCLUSION:

Management of NOF fracture in ESRD patients with SHPT always possess a challenge to orthopaedic surgeon. In patients with high PTH, reducing PTH will improve the bone status. In light of this, such patient should be comanaged by orthopaedic surgeon, nephrologist and endocrine surgeon. Non-surgical treatment of the fracture following parathyroidectomy could be an option in management given the potential risk of surgery due to underlying metabolic condition and morbidity from osteosynthesis in a severely osteopenic pathologic bone .

REFERENCES:

1. USTA, M., ERSOY, A., ERSOY, C., & GÖKSEL, G. (2019, October 29). Chronic kidney disease presenting with bilateral spontaneous femoral neck fracture: A case report. *Turkish Journal of Internal Medicine*, 1(1), 30–33.