

Abstract

Adenoma of the parathyroid is a benign tumor. It is responsible for 85% cases of primary hyperparathyroidism (PHPT). It is commoner among females of 5th decade. Majority of cases are diagnosed during evaluation of an incidentally found raised calcium level. Low velocity fracture is a remote presentation of PHPT.

We present a 20-year-old Sri Lankan male who presented with a pathological fracture of neck of right femur (NORF). He neither had symptoms of hypercalcemia nor other comorbidities in past medical history. Apart from shortened externally rotated right leg, physical examination was unremarkable. His non-contrast computed tomography (NCCT) of pelvis revealed a transcervical fracture of NORF and severe osteopenia. He had raised levels of calcium, alkaline phosphatase and parathormone with reduced serum phosphate level, indicative of primary hyperparathyroidism. Neck ultrasound scan revealed a mass lesion in the right lower pole of thyroid gland. Technetium (Tc) ^{99m} sestamibi parathyroid scan demonstrated a focal abnormal uptake in same territory. He underwent lag screw fixation of right hip followed by right thyroid lobectomy with excision of inferior parathyroid gland. Vitamin D and calcium was commenced to prevent hungry bone syndrome. Histology revealed an adenoma of parathyroid

gland. Screening of coexisting multiple endocrine neoplasia (MEN) was negative.

Parathyroid adenoma can rarely present as a pathological fracture although a majority are asymptomatic. Exclusion of other etiologies which gives rise to pathological fracture as well as hypercalcemia are of paramount importance. Tc^{99m} sestamibi scan is an excellent radiological tool that carries a minimum adverse effect profile. It can pinpoint the exact location of the adenoma with a sensitivity of over 95%. Prompt fixation of the fracture as well as excision of adenoma are vital in reducing the future fracture risk. Anticipation of hungry bone syndrome and timely calcium and vitamin D replacements will prevent life threatening hypocalcemia.