

PARATHYROID ADENOMA: PRESENTED WITH GENERALIZED BONE PAIN AND MULTIPLE PATHOLOGICAL FRACTURES IN A 29 YRS LADY- A CASE REPORT

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Abstract:

One of the common reasons of primary hyperparathyroidism is parathyroid adenoma. This can present in different ways- diffuse bone pain, multiple stones in the body warranting repeated surgery, renal failure, abdominal discomfort, depressed mood etc. Here we present a young woman presented with surgical removal of gall stone and renal stones, pathological fractures and her generalized bodyache was treated for rheumatological cause for a long time. After surgical removal of adenoma he got back to life within couple of months.

Key words: Primary hyperparathyroidism, multiple stones, parathyroid adenoma

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Introduction:

Symptomatic Primary Hyperparathyroidism (PHPT) can present in various ways- with skeletal involvement (bone pain, fracture and palpable multiple Osteitis Fibrosa Cystica (OFC) being the major clinical symptoms. Besides, renal calculi with nephrocalcinosis and renal failure, fatigue with proximal muscle weakness, pancreatitis, gall bladder stone, constipation and depression can be presenting complaints. Hence the clinical manifestations are coined with the following terms *kidney stones, abdominal goans, painful bones, psychic moans and fatigue overtones*. Here we present a young lady suffering from her age of 22 years and diagnosed at 29 years of age, with a misery of 7 years.

Case Report:

A 29-year-old married woman presented with pain in the multiple joints of upper and lower limbs for last 7 years. She was treated with different analgesic with a presumptive diagnosis of rheumatoid arthritis. Along with

this she was also having abdominal discomfort and constipation for the same period. Five years back she developed upper abdominal pain and was treated with PPI, assuming peptic ulceration as she was taking NSAID for a long time. Later it was diagnosed as gall bladder stone and was operated. After one year she again developed loin pain and this time diagnosed as bilateral renal stone and right stone was removed. But her generalized bone pain was continuing. For last 5 months she was bed ridden and unable to walk. X-ray hip showed pathological fracture of left hip and was admitted in the Medicine Department of Dhaka Medical College Hospital. Upon enquiry she gave history of passage of stone with urine on several occasions, but denies of any morning stiffness. On examination she was ill looking, with diffuse tenderness all over body, no joint swelling, wasting of muscles of both upper and lower limb. Her left hip movement was restricted and painful. BP-100/80 mm of Hg, pulse-88/min. Examination of neck- normal, no swelling or nodule palpable. A diagnosis of

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Primary Hyperparathyroidism was made with the findings of S. Calcium- 12.8mg/dl, PTH- 1770 pg/dl (range-15-60 pg/dl), S. Inorganic phosphate- 1.9mg/ dl, USG neck- enlarged left lower parathyroid (3.1X1.1 cm²). Radiological evaluation shows multiple fractures: impacted pathological fracture of right neck of the femur (Fig-1), osteopenia with fracture of upper end of right humerus (Fig. 2) and fracture of right 6th rib. Localization of parathyroid was done by



Fig.-1: Impacted pathological fracture of left femur



Fig.-2: Fracture of upper end of humerus

sestamibi scan with thallium-technetium subtraction study/ technetium - 99 m (Tc - 99 m) and uptake was visible on both early and delayed film (Fig.3). Other investigations: thyroid function tests, S. Creatinine, S. Uric acid, RA test, RBS, S. uric acid and CBC were within normal limit. Surgery was done through neck incision and the adenoma is removed in total (Fig. 4). Immediately after surgical removal of the adenoma a rapid reduction of PTH to 5.44 pg/dl was noted. Patient was given IV Calcium after operation for 2 consecutive days followed by oral Calcium for 10 days. Serum

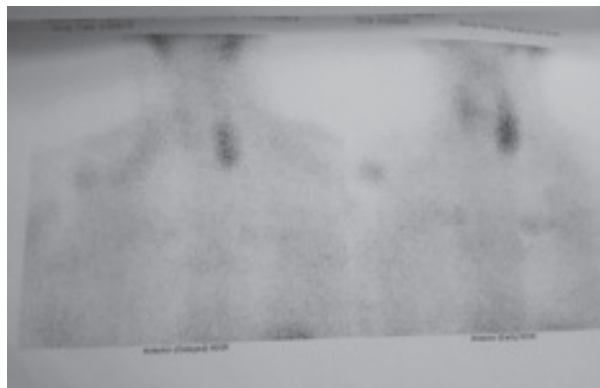


Fig.-3: Parathyroid Adenoma located by sestamibi scan (Early and delayed uptake)

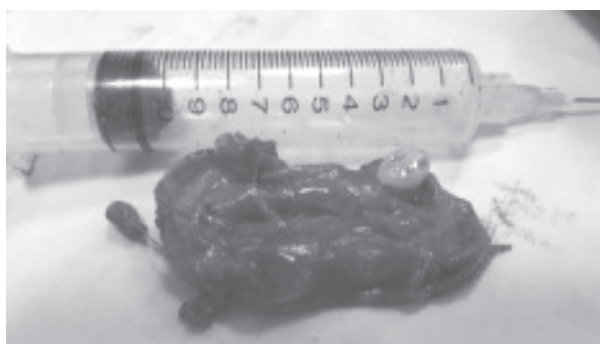


Fig.-4: Parathyroid adenoma after removal

calcium level was stable at 9.82mg/dl during post-operative period. Histopathology showed parathyroid adenoma. No tetany or tingling of face was observed. Patient was followed up over next 8 months and was having normal life with no pain and appearance of new fractures.

Discussion:

Our patient was presented at earlier age (22 yrs), Indian study showed far younger age (21-55 yrs) group than western data¹. Several case reports from Bangladesh age ranges from 18-64 yrs². Diagnosis in the western world diagnosis is mostly of asymptomatic cases through routine screening for other problems. In a study of 97 cases from US, radiological evidence of bone disease was only 1% and nephrolithiasis was found in 18% cases³. But study from this sub-continent showed most of the cases diagnosed are symptomatic cases. In a study with 37 cases operated with primary hyperparathyroidism, over 12 years period in Aga Khan University of Pakistan, showed 32.4% with bone disease alone and 27% with both

bone and stone diseases⁴. Our patient presented with both bone and stone disease, presentation of bone pain was due to osteopenia and multiple fractures. Lag period for diagnosis was found to be 1 month to 16 years in North India⁵. Our case was diagnosed after 7 years (84 months). She could have been diagnosed earlier when presented with multiple stone diseases, repeated passage of stones with urine and body ache but no signs of rheumatoid arthritis. Besides these she also had constipation and proximal muscular weakness which are also a feature of Hyperparathyroidism. PHPT can also present with abdominal pain (39%), polyuria (37%), psychiatric manifestations (23.1%) and palpable neck nodule in 19%^v. Our patient had abdominal pain most probably from cholecystitis from stone disease and had no neck nodule. Surgery is curable in almost all cases and parameters for successful surgical exploration is normalization of corrected parathormone and calcium levels. In this case parathormone and S. Calcium both came normal after surgery. With the availability of sestamibi scan parathyroid can be localized in most of the cases (91%) and USG can detect in 78% cases⁶, eased removal of the gland during surgery. We operated through neck incision, endoscopic parathyroidectomy of two cases with three ports has been reported from Surgery Department of BSMMU⁷. Our patient had her normal life back after removal of the adenoma. Otolaryngology Department of BSMMU has reported 32 cases over 7 years period (2000-2007) with mostly with bone and stone disease⁸.

In our department we also operated 6 cases over last 2 years (2014 to 2016) presented mainly with bone and stones disease. High index of suspicion with a good surgical team can alleviate longer misery of hyperparathyroid cases.

Conclusion:

Delay in the etiological diagnosis of primary hyperparathyroidism can cause misery in the life of patient. S/he may undergo different modalities of treatment for a longer period of time. Our case has undergone multiple surgeries, different medical treatment over a period of 7 years before the definitive treatment. High index of suspicion can reach early diagnosis and give patient early relief for physical and financial pain.

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