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CASE REPORT

HYPERPARATHYROIDISM

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Introduction

Excessive secretion of Parathyroid Hormone may be primary due to adenoma or hyperplasia of the parathyroid glands, secondary due to persistent hypocalcaemia or tertiary when secondary hyperplasia leads to autonomous over activity of the glands. Whatever the cause increase PTH production leads to hypercalcaemia. This may be symptomless or may present with bizarre symptoms such as psychosis, renal stones, anorexia, abdominal pain, polyurea, osteoporosis, pathological fractures and deformities.

Case Report No. 1

Miss S.K. a 16 years old girl from Balakot Hazara presented with six months' history of severe body aches, anorexia, vomiting, inability to walk, insomnia, deformed lower legs and knees. On examination she was anaemic Apart from a small nodule in the right thyroid lobe, rest of the examination was normal. She was admitted and investigated. Following are the results of investigations.

HB 9.6 G/dl, ESR 20 mm 1st Hour, Urine with albumin traces, RBC 3-5 PHF, Pus Cells 6-8 PHF. Blood Calcium 12.2 mg/dl, Acid Phosphatase 3 KAU, Blood Urea 25 mg/dl, Serum T4 was 4.1 and T3 was 1.22, TSH level could not be estimated as this facility was not available in our laboratory.

X-Rays of forearms, knees, legs and skull showed sub-periosteal bone resorption, generalized loss of bone density, cyst formations, disorganization of knee joints and pathological fractures in the tibias. She was diagnosed as a case of parathyroid adenoma leading to hypercalcaemia and was operated.

Post-operatively she had a stormy course and developed chest infection and hypocalcaemia with tetany. Her blood calcium level at this stage fell to 7 mg/dl. She was given intravenous calcium and antibiotics. Her blood calcium gradually returned to 9.1 in one week's time and her fever settled. The tetanic convulsions stopped as well. Adenoma removed at operation was proved histologically to be of parathyroid origin. Patient was discharged home after two weeks. At subsequent reviews she had gained weight, bone cachexic with sabre tibias which were painful on pressure.

Apart from a small nodule in the right thyroid lobe, rest of the examination was normal. She was admitted and investigated. Following are the results of investigations. pains had disappeared and the patient was able to start walking without any support.

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Case Report No. 2

Mrs G.S., age 55 years from Kohistan Hazara admitted to Medical Ward for generalized body-ache, thirst, weight loss, increased tiredness, and anorexia. Examination revealed a thin emaciated body with swelling of the left thyroid gland. She had a kyphotic thoracic spine. Rest of examination was normal. Investigations revealed HI) 9.6, blood sugar 80 mg/dl, urine clear, serum calcium 12 mg/dl and phosphate 2.15 mg/dl.

X-Ray chest and KUB were clear, X-Ray peluis and legs showed extreme osteoporosis and fracture both femoral necks. It was decided to remove the swelling. At operation at 4 cm x 3 cm brownish coloured parathyroid adenoma was removed and sent for histology which confirmed the origin of parathyroid adenoma.

Post-operatively her blood calcium returned to normal. On the 4th post-operative day she developed chest infection with fever. In spite of the best efforts the patient expired on 15th post-operative day of multi-system failure.

Discussion

Other causes of hypercalcaemia are: —

Malignant Diseases

Like carcinoma breast, Bronchus, Multiple Myeloma, Carcinoma Oesophagas, Thyroid, Colon, G1 Tract, Female Genital Tract, melanomas, lymphomas and thymoma (Mayer 1960; Fiske et, al, 1980). Hypercalcaemia with malignant disease indicates bone involvement and is a bad prognostic sign.

Renal Failure

Hypercalcaemia associated with secondary hyperparathyroidism may occur in patients with chronic renal failure complicated by osteodystrophy and is related to parathyroid hyperplasia of various degrees (Stanbury and Lumb 1966). Prolonged hypercalcaemia leads to metastatic calcification around the joints and in arteries, subcutaneous tissues, the eye and the heart (Robert & Waller 1981).

Thyroid Diseases

Severe hypercalcaemia rarely occurs in hyperthyroidism but a mild elevation of serum calcium level is not unusual (Adams et al 1967). It may occur in hypothyroidism as well. (Lowe et al, 1962).

Thiazide Diuretic Treatment

Vitamin D intoxication, lithium treatment, familial benign hypercalcaemia, milk-alkali syndrome, sarcoidosis, immobilization and Addison's diseases.

Comments

With easy availability of bio-chemical tests the diagnosis of hypercalcaemia can be easily made. It is important to look for a cause, because the causes are so divergent. If diagnosed and correctly treated, it is very rewarding to see these patients well again.

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