

A Rare case of Multiple Myeloma coexisting with Primary Hypoparathyroidism , Osteoporosis and paradoxical hypocalcaemia in a 31 year old female , at a tertiary care centre in New Delhi- Sanchit Singh-PGIMER & Dr. RML Hospital

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Abstract

A 31 year old female patient was evaluated with complaints of backache for last 3 months, dyspnoea on exertion, low grade fever, menorrhagia since last 1 month. On physical examination she was underweight with a BMI of 23kg/m², no organomegaly, no obvious clinical sign. Investigations revealed Hb- 4gm/dl, reticulocyte proliferation index of 0.05, microcytic hypochromic anaemia with iron deficiency, serum albumin of 3.6 gm/dl, serum calcium 7.6 mg/dl, serum phosphorus 4.9mg/dl, normal LFT & KFT.

Her hormone profile was normal, but iPTH was low at 6.10 pg/ml, DEXA scan showed Osteoporosis with Zscore of -5.084, Vitamin D levels were 113.5 ng/ml. Her urine albumin, bence jones protein initially was negative, MRI lumbar spine revealed disc herniation at multiple lumbosacral levels.

A preliminary diagnosis of Severe Iron deficiency anaemia with Primary Hypoparathyroidism with Osteoporosis was made .She was started on calcium supplementation, Inj Teripratide and haematinics. She returned after two months with worsening symptoms, no relief in backache. Investigations revealed Hb 3.6 gm/dl, S. Albumin 2.8 gm/dl, Globulins 9.5 gm/dl, S. Calcium of 8.2 mg/dl KFT was still normal.

Bone marrow examination revealed plasma cells constituting 85-90% of haematopoietic cells. Serum electrophoresis revealed Monoclonal Gammopathy of 8.8 g/dl in gamma globulin region increased serum IgG and Lambda light chain, serum beta 2 microglobulin of 6405ng/ml. The diagnosis of MULTIPLE MYELOMA was thus confirmed, was started on BCD regimen and she improved dramatically.

Primary Hypoparathyroidism with Mutiple Myeloma is an unknown entity, in this case the paradoxical hypocalcaemia despite significant bone disease posed a diagnostic challenge, and lead to a delay in diagnosis. Ours is a unique case as no such case has previously been reported. This could pave way for extensive research in the role of parathyroid in Myeloma pathogenesis.

Hypercalcemia is a typical clinical issue with an expected pervasiveness of 15% among hospitalized patients. Different myeloma (MM) and essential hyperparathyroidism (PHPT) are among the most well-known reasons for hypercalcemia however concurrence of both pathologic cycles in a patient is an incredibly uncommon wonder. In this paper we have examined a patient giving this uncommon wonder.

We have likewise given an exhaustive survey of the logical writing distributed on codiagnosis of MM and PHPT. Synopsis of distributed cases in Codiagnosis of PHPT and MM ought to be associated in cases with hard to-control hypercalcemia. The greater part of the instances of concurrent MM and PHPT have been seen in females (23 out of 29 announced cases). The most youthful patient with codiagnosis was a 45-year-old female and the most seasoned patient was a 92-year-old female.

PHPT is more normal in females, though the inverse is valid for MM. Contrasts in occurrence of the two infections may clarify female dominance (MM less successive than PHPT). Introductory determination was exceptionally factor, eleven cases had essential analysis of hyperparathyroidism, ten had essential finding of MM and seven had both conclusion made at introduction. The kind of immunoglobulin chains of MM saw in all the cases was variable as six patients had light chain MM, remaining patients had a blend of weighty and light chain MM, one patient had nonsecretory sort of MM. All the patients had calcium ≥ 11 mg/dL at the hour of introduction. Larger part of patients had parathyroid adenoma as a reason for PHPT, scarcely any had boss cell hyperplasia, and none had parathyroid disease.

Parathyroidectomy, blend of radiotherapy, and chemotherapy had been utilized for treatment of this concurrent condition with variable achievement. Rao et al. proposed that parathyroidectomy in patients with concurrent PHPT and MM serves three folds; first, it eliminates disarray about etiology of

hypercalcemia; second, it changes anticipation of myeloma; third, calcium can be utilized as a tumor marker in cases if there is a repeat of tumor. Thinking about age, our patient was not a contender for medical procedure, in such patient populace clinical option to parathyroidectomy is required. Ten out of 29-patients kicked the bucket inside 5 years after codiagnosis, and out of those ten, eight passed on inside one year.