Unusually Prominent M Protein in Indian Patients with IgD Multiple Myeloma

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IgD myeloma is a rare form of multiple myeloma (MM) characterized by anemia, renal failure, hypercalcemia, small amounts of M protein, prominent Bence Jones (BJ) proteinuria of λ type and short survival. Here we report 3 cases of IgD MM with M protein concentrations of 1.2, 1.2 and 2.6 g/dl. One of them is on therapy for more than 2 years and the other 2 survived for 17 and 24 months.

Case 1. A 55-year-old male presented with a history of skeletal pains and difficulty in walking of 9 months duration. There was no spleno- or hepatomegaly. A bone marrow aspirate showed 60% plasma cells. Urine was positive for BJ protein. Serum electrophoresis (EPP) showed IgD λ monoclonal protein of 1.2 g/dl. Other investigations are shown in table 1. He was put on melphalan 5 mg daily for 5 days and prednisolone 10 mg daily for 7 days every month and is on regular follow-up.

Case 2. A 46-year-old male presented with a history of cough and weakness since 5 months. On clinical examination he was pale but there was no spleno- or hepatomegaly. The bone marrow aspirate showed 23% plasma cells and IgD monoclonal peak on serum EPP. The concentration of the M protein was 1.2 g/dl (table 1). He received 6 cycles of C-VAMP (cyclophosphamide, vincristine, adriamycin, methylprednisolone) chemotherapy from April 1991 to October 1991 and achieved clinical remission but relapsed 17 months after initial presentation [1]. Repeat bone marrow aspirate revealed 85% plasma cells and reappearance of a prominent IgD peak (2.8 g/dl). Table 1. Laboratory features of Indian patients with IgD MM

Case 3. This 45-year-old male was seen with a 18-month history of backache and weakness. On clinical examination he was found to have lumbar tenderness. There was no spleno- or hepatomegaly. IgD monoclonal protein concentration was 2.6 g/dl. He was given local

radiotherapy and 4 cycles of chemotherapy (vincristine, cyclophosphamide and prednisolone). He had a partial response and survived for 24 months after initial presentation.

IgD MM is a rare form of plasma cell dyscrasia commonly seen in males below 60 years of age. All our cases had history and clinical findings classical of IgD myeloma [2]. They were all males and below the age of 56 years. The IgD M band is reported to be present in a very low concentration, since it is catabolized very rapidly (half-life of 2.8 days) [3]. However, all our cases showed unusually high IgD monoclonal protein concentrations on serum EPP. BJ proteinuria was present in all the 3 patients and was of the λ type. Renal failure was noted in 2 of our cases, and the hemoglobin was less than 10 g/dl in all (table 1).

Typical features of symptomatic IgD MM are the presence of more than 20% myeloma cells in the bone marrow, a large amount of BJ proteins and multiple bone lesions producing skeletal pain. It is interesting that case 3 had only 3% plasma cells in the bone marrow. Yet markedly elevated levels of IgD in all 3 cases would indicate that our patients had a high tumor burden.

Survival is usually short in IgD MM with only 40% alive at the end of 1 year and only 2.2% surviving more than 10 years [4]. If the biological behavior of our patients with IgD MM was identical to that of previously reported cases, their survival should have been further shortened. On the contrary, our patients seem to have a better survival. Does this mean IgD MM has a less aggressive behavior in Indian patients?

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