

An Unusual Myeloma Case with Normal Erythrocyte Sedimentation Rate and Serum Immunoglobulins

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Abstract

Multiple Myeloma (MM) is a disease characterized by the increase of plasma cells in bone marrow or in other tissues and increased production of abnormal immunoglobulin (Ig) or Ig parts. In this report, we aimed to present a case of myeloma whom showed in our clinic with complaints of diarrhea, vomiting, fatigue and difficulty in walking. A 68-year-old male patient presented with diarrhea, fatigue, nausea, vomiting, and loss of appetite. He had splenomegaly in physical examination. Laboratory test revealed erythrocyte sedimentation rate: 4 mm/h and corrected calcium: 11.1 mg/dl. In conclusion, despite it is rare, multiple myeloma case may present with normal erythrocyte sedimentation rate and serum immunoglobulin levels. Anemia, bone lesions and hypercalcemia in an elderly may prompt diagnostic effort for multiple myeloma.

Keywords: *Multiple myeloma; Erythrocyte sedimentation rate; Hypercalcemia*

Introduction

Multiple Myeloma (MM) is a disease characterized by the increase of plasma cells in bone marrow or in other tissues and increased production of abnormal immunoglobulin (Ig) or Ig parts. The production of monoclonal Ig or Ig light chain is the main feature of the disease. The most commonly produced monoclonal protein is IgG or IgA. Less frequently immunoglobulin light chain or very rarely other types of Ig are produced. The median age of the patients is 65 and only 3% are under 40 years of age. Patients have a 5-year survival rate of 25% and a 10-year survival rate of around 5%.

The etiology of the disease is not fully understood. It accounts for 1% of cancer-related deaths in Western countries [1,2]. It accounts for 1-2% of all malignancies and 10% of hematological malignancies. The incidence is four per 100000 populations. In recent years, the frequency has increased a bit. This increase depends on the longevity of people's lives and the frequent use of diagnostic tests [1].

In this report, we aimed to present a case of myeloma with showed in our clinic with complaints of diarrhea, vomiting, fatigue and difficulty in walking.

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Case Report

A 68-year-old male patient presented with diarrhea, fatigue, nausea, vomiting, and loss of appetite. He complained of difficulty in walking since he had knee arthroplasty operation 1 month ago. He diagnosed with Candida esophagitis in upper endoscopy 2 months ago. He has been treated for type 2 DM for 10 years. His medications include lansoprazole 30 mg daily, and insulin glargine 10 IU once daily.

His physical examination findings were as follows: Systolic and diastolic blood pressure was 100 mmHg and 70 mmHg, respiratory rate was 16 per minute, heart beat was 96 per minute. Rest of the entire physical examination findings were normal except coarse respiratory sounds in basal of left hemi-thorax and bilateral pretibial edema (+/+).

Laboratory findings of blood analysis include Potassium: 2.5 mmol/l (reference range: 3.5-5.5 mmol/l), albumin: 2.6 g/dl (reference range: 3.4-4.8 g/dl) CRP: 7.6 mg/dL (reference range: 0-5 mg/dL), cortisol: 13 µg/dL (reference range: 2.9-17.3 µg/dL), parathyroid hormone: 9.7 pg/ml (reference range: 15-68.3 pg/ml), glomerular filtration rate: 84 ml/min/1.73 m², AST: 38 U/l (reference range: 5-34 U/l), ALT: 20 U/l (reference range: 0-55 U/l), adrenocorticotrophic hormone: 5.21 pg/ml (reference range: 0-46 pg/ml), troponin: 1880 pg/ml (rd 0-26 pg/ml), erythrocyte sedimentation rate: 4 mm/h (reference range: 0-20 mm/h), corrected calcium: 11.1 mg/dl (reference range: 8.8-10 mg/dl), glucose: 110 mg/dl (reference range: 75-100 mg/dl), vitamin B12: 550 pg. A 24 hours urine analysis revealed protein: 5420 mg/day (reference range: 0-300 mg/day), microalbumin: 5105 mg/day (reference range: 0-30 mg/day).

Hemogram test results showed a white blood cell count of 6630/mm³, hemoglobin 9.4 g/dl, platelet count 209000/mm³.

Chest radiogram revealed a hypodense lesion in the right lung periphery. The patient was diagnosed with acute coronary syndrome due to clinical findings and increased troponin levels. Coronary angiography revealed narrowing in coronary arteries that just required medical treatment.

In thoracic and abdominal CT, soft tissue masses (metastasis) causing destruction of the bones in the right fifth costae and sternum, multiple lytic lesions in the thoracic vertebrae and left clavicle, splenomegaly, multiple lytic lesions in the left iliac wing and lumbar vertebrae lesions (metastasis) and nonspecific nodules in the lung were detected. Atypical cells were not detected in the peripheral blood smear. Upper and lower gastrointestinal endoscopy were normal. Anti-gliadin IgA and IgG, anti-endomisium IgA and IgG and tissue transglutaminase IgA tests were negative for Celiac disease.

In serum protein electrophoresis, increase in a-1 and a-2 bands by 7.1% (reference range: 2.9%-4.9%) and 17.8 (reference range: 7.1% -11.8%) along with a decrease in gamma band by 8.8% (reference range: 11.1%-18.8%) detected.

Of serum immunoglobulins, IgM was <25 mg/dL (reference range: 22-240 mg/dL), IgA was <85 mg/dL (reference range: 101-645 mg/dL) IgG was <320 mg/dL (reference range: 540-1822 mg/dL).

Brain MR imaging of patients revealed common metastatic lesions in calvarium, clivus, and cervical vertebrae along with cerebral atrophy. A transthoracic biopsy was performed to the metastatic lesion destroying the right fifth costae. Plasma cells were detected in histopathologic examination of the biopsy material which showed positive staining for CD38, and kappa and negative staining for lambda, pancytokeratin and CD68.

Blood and urine cultures obtained since fever developed. Klebsiella pneumonia was found in the urine culture, but blood cultures were negative. Ceftriaxone 1gr twice added to daily treatment of the patient. His symptoms relieved by this regimen.

The patient was referred to the Hematology department with a diagnosis of plasma cell myeloma. The chemotherapy treatment of the patient continues in the hematology unit.

Discussion

We presented here an unusual multiple myeloma case characterized with increased production of Kappa light chain.

Multiple myeloma is a disease of elderly. Median age subjects with multiple myeloma is 69 years and most of the patients are men [3]. Present multiple myeloma case was a 68 year old man which was consisted with literature.

Multiple myeloma is usually characterized with anemia (mostly anemia of chronic disease), hypercalcemia, lytic bone lesions, kidney disease, however, it can be diagnosed in asymptomatic stage, too [4]. In present case, patient had hypercalcemia, anemia of chronic disease, bone lesions and stage 2 chronic kidney disease.

Splenomegaly and lymphadenopathy are rare findings in multiple myeloma. On the other hand, increased serum immunoglobulins, and elevated erythrocyte sedimentation rate are usually frequent features of the disease. In contrast to literature knowledge, present case had low serum immunoglobulin and normal erythrocyte sedimentation rate along with splenomegaly.

Direct radiographs may show lytic and metastatic bone lesions in subjects with multiple myeloma. However, PET CT or magnetic resonance imaging (MRI) studies may be required if plain films fail to show any bone lesions [5]. The patient presented had lytic bone lesions in direct graphics in sternum, costae and vertebrae.

Infection is a common problem during the course of multiple myeloma due to hypogammaglobulinemia. A study in literature higher risk of infectious complications in multiple myeloma subjects [6]. Urinary tract infection developed in present case responded well to ceftriaxone therapy.

In conclusion, despite it is rare, multiple myeloma case may present with normal erythrocyte sedimentation rate and serum immunoglobulin levels. Anemia, bone lesions and hypercalcemia in an elderly may prompt diagnostic effort for multiple myeloma.

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