Immunoglobulin D Multiple Myeloma, A Rare Myeloma Type in Elder Patients: Case Report

Yaşlılarda Nadir Görülen Multipl Miyelom Olgusu: İmmunglobulin D Multipl Miyelom

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ABSTRACT Immunoglobulin D multiple myeloma (IgD-MM) is a rare type in myelomas. Characteristic findings are diagnosable at advanced stage and agressive behaviour. Patients are usually male and under 65 years old. We aimed to present a geriatric IgD-MM case which has only fatigue and widespread body pain. 67 years old, male patient admitted to our clinic with widespread body pain, fatigue. Bicytopenia, elevated erythrocyte sedimantation rate and immun paralysis found at blood analyses. A band which has no match at lambda column was found at serum immunoelectrophoresis. IgD Lambda paraproteinemia was detected in serum immunoelectrophoresis for IgD and IgE. Patient diagnosed as Ig D Lambda Myeloma with rised numbers of plasma cells in bone marrow biopsy, strongly positive staining at IgD Lambda chains in immunohystochemical stain. IgD-MM can be ommited because of oligo/non-secretory presentation. So we have to consider rare types of multiple myeloma at differential diagnoses.

Key Words: Multiple myeloma; immunoglobulin delta-chains; aged

ÖZET İmmunglobulin D multipl miyelom (Ig D-MM) miyelomların nadir bir alt tipi olup ileri evrede tanı almakta ve agresif seyretmektedir. Sıklıkla 65 yaş altında ve erkeklerde görülmektedir. Biz burada geriatrik yaş grubunda halsizlik ve vücut ağrısı dışında belirgin semptomu olmayan ve yaşlı popülasyonda nadir görülen Ig D-MM vakasını sunmayı amaçladık. 67 yaşında, halsizlik ve vücut ağrısı şikayeti olan erkek hastanın tetkiklerinde bisitopeni ve sedimentasyon yüksekliği, immunparalizisi olması ve serum immün elektroforez sonucunda lambda sütununda karşılığı gösterilemeyen bir bant tespit edilmesi üzerine Ig D ve Ig E için yapılan serum immün elektroforezinde Ig D lambda paraproteinemi saptandı. Kemik iliği biyopsisinde neoplastik plazma hücre artışı ve Ig D ve Lambda zincir yoğun pozitif bulunması üzerine Ig D ile Lambda MM tanısı konuldu. Sonuçta, Ig D-MM nonsekretuar veya oligosekretuar olabilmesi nedeniyle gözden kaçabilmektedir. Şüphe duyulan yaşlı hastalarda immün elektroforez ile multipl miyelomun dışlanması faydalı olacaktır.

Anahtar Kelimeler: Multipl miyelom; immunglobulin delta-zincirler; yaşlı

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Multiple myeloma is a malignant disease originating from differentiated plasma cells. It is the second most common haematologic neoplasia and especially seen in elder population. 35% of myeloma patients are under 65 years old, 28% are between 65-74 years old, 37% are over 75 years old. IgD Multiple Myeloma (IgD-MM) is a rare type of myelomas (1%), more common in male gender and usually diagnoses at under 65 years old.[1,2] Clinical findings like lymphadenopathy, he-

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patomegaly, extra osseous lesions, renal failure and amiloidosis can accompany to myeloma. IgD myeloma usually diagnoses at advanced stage and behave more agressive than other types. As a result; anemia, hypercalcemia, bone lesions and renal failure are more common in IgD-MM.[3,4] We intend to present a IgD-MM case which presented with only widespread body pain and fatigue.

CASE REPORT

A 67 years old, male patient admitted to our clinic with fatigue and widespread body pain. Patient was using acetylsalicylic acid 100 mg/day and lisinopril 5 mg/day for known ischemic heart disease for 20 years. Conjunctival pallor was only finding at physical examination. Leukocyte 4.4 X 10^3/μL (4.1-10.3), neutrophil 2.17 X 10^3/μL (2.1-6.1), lympocyte 1.46 X 10^3/μL (1.3-3.5), haemoglobin 8.4 X 10^3/μL (12-17.2), haematocrit 26% (42-52), thrombocyte 85 X 10^3/μL found at blood analyses. Poikilocytosis and hypochromia at eritroid cells and low platelet count detected in peripheral blood smear. Urea 91 mg/dL (10-50), creatinin 1.9 mg/dL (0.7-1.2), calcium 9.1 mg/dL (8.4-10.2), uric acid 7.8 mg/dL (3.4-7) LDH 437 U/L (240-480), ferritin 490 ng/ml, iron16 μg/dL, total iron binding capacity 122 μg/dL (228-428), erytrocyte sedimantation rate 75 mm/hour, CRP 2 mg/dL (0-5), beta 2-microglobulin 5850 ng/mL, total protein 5.5 g/dL (6.4-8.3), albumin 3 g/dL (3.5-5.2), albumin/globulin rate was 0.8 at blood analyses. At serum protein electrophoresis; percentages of albumin, alpha 1-2, beta 2 and gamma bands were 46%, 8.8%, 18%, 11% and 9.2%. There was an elevation at alpha 1-2 and beta 2 bands while albumin and gamma bands were decreasing.

Lymphoproliferative disorders, multipl myeloma and tuberculosis were first considerations at differencial diagnose. Also temporary reasons of bicytopenia were searched like viral infections and drug side effects. Serological tests for hepatitis B-C, brucellosis, HIV, EBV, HSV infections were negative. Anti HBs IgG and Anti-Parvovirus B19 IgG was positive. Chest radiography was normal and PPD test was anergic. Patient has never showed B symptoms of lymphoma. That's the reason why we didn't think tuberculosis and lymphoma at first place. IgG 941 mg/dL, IgA 67 mg/dL, IgM 33 mg/dL found at serum analysis which was made for immune paralysis. Another serum immunoelectrophoresis for IgD an IgE was made for the band which has no match in lambda column so we found IgD Lambda paraproteinemia. There was no lambda or kappa chains in urine immunoelectrophoresis. Bone survey radiographies were negative for litic lesions. Also abdomen ultrasonography didn't show any organomegaly. Increased numbers of neoplastic plasma cells (26%) were seen in bone marrow biopsy. IgD lambda was strongly positive, kappa and cyclin D1 were negative at immunohystochemical stain. Patient diagnosed as IgD lambda myeloma with this results.

Bortezomib and dexamethasone treatment protocol was started to the patient according to the stage of myeloma: Durie Salmon Stage 3B / ISS Stage 3. Alkylating agents wasn't used because of coronary heart disease history. Serum creatinine levels rised to 2.3 mg/dL during treatment. At the end of the first cure serum creatinine level was 1.5 mg/dL. Renal damage of myeloma was certain when serum creatinine clearance found 42 ml/minute at 24 hour urine analysis. Patient is stil taking treatment under control of the Haematology and Nephrology departments.

DISCUSSION

IgD-MM is a rare subtype of multiple myelomas. Presentation of this type is usually at advanced stage and younger ages than other types.[5] Diagnose can be ommited because of oligo/non secretory behaviour. So there can be no monoclonal bands in the serum protein electrophoresis.[6]

There was no differential finding at peripheral blood smear and serum protein electrophoresis of patient who was searched for haematologic malignancies because of bicytopenia. But prediagnosis was multiple myeloma at the light of clinical and laboratory findings like anemia, elevated erytrocyte sedimentation rate, renal failure and immunoparalysis. We repeated serum protein immunoelectrophoresis for IgD when a band without any match at lambda column was detected. It

was showed lambda paraproteinemia. Kappa and Lambda light chains could't found at urine immunoelectrophoresis, as a result lambda light chain myeloma diagnose was eliminated. IgD myeloma was confirmed by bone marrow biopsy.

Janus et al. showed that IgD-MM has faster progression than other types in a study of 7 IgD-MM cases at 2005.[5] Symptoms and findings are more clear than other types because it usually becomes diagnosable at advanced stage. Although our patient diagnosed at advanced stage, he didn't show any manifest symptoms except fatigue. That's the diversity point of our case from other cases in the literature.

Average age pointed as 55 years old in a study of Kim et al. which based on 75 IgD-MM cases at 2011. Symptoms were manifest at most of the patients: 77% had bone pain, 77% had fatigue, 53% had renal failure, 27% had hypercalcemia. 89% of patients had Lambda light –chain type myeloma. 67% of patients had stage 3 or higher stage disease.[7-9] Our case is different from other cases in the literature with having no symptoms except fatigue and widespread body pain and being older than other cases.

As a result, Multiple Myeloma must be in differential diagnoses at elder patients with anemia, elevated erythrocyte sedimentation rate and/or renal failure without any underlying reasons. But IgD-MM can be ommited because this type can be oligo/non-secretory. Serum immunoelectrophoresis for IgD and IgE can be useful for diagnose.

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