OPIS PRZYPADKU

Patient with atypical chest pain and nephrotic range proteinuria finally diagnosed with non-secretory myeloma

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ABSTRACT

Multiple myeloma is the second most common neoplastic disease of lymphoid tissue in adults. However, its atypical non secretory form, is quite rare. We present a case of 70 year old male with atypical chest pain and nephrotic range proteinuria finally diagnosed as non secretory myeloma who did not present any of characteristic findings when admitted to hospital. Despite the unusual course the diagnosis was established quickly enough to provide a proper treatment. One should remember that occasionally patients do not match typical criteria necessary for diagnosing a disease.

KEY WORDS
proteinuria, chest pain, myeloma

INTRODUCTION

Multiple myeloma is a malignant, considered a progressive and incurable plasma-cell neoplasm, characterized by slow monoclonal expansion of plasmablastic precursor cell in bone marrow [1]. Sometimes an infiltration of plasma cells in other tissues and organs is observed. Neoplastic plasma cells produce excessive amounts of monoclonal protein that can be measured in serum (protein M) or in urine (Bence-Jones's protein). Occasionally (3%), disease may occur without any secretion of proteins. We present a case of a 70 year old patient with atypical chest pain and proteinuria in whom we diagnosed non-secretory myeloma.

CASE REPORT

70 year old male patient admitted to our department in order to diagnose atypical retrosternal pain, not associated with physical effort. The pain was stabbing, on the right site, radiating into mediastinum. Additionally the patients suffered from dyspnea following intensive physical effort. In patient's history there was:

- CAD (since 1995),
- Myocardial infarction (2006),
- Heart failure (NYHA II),
- Spondylosis,
- Thrombophlebitis of lower limbs,
- Nephrolithiasis,
- Cholecystectomy in 2005.

Echocardiography revealed slightly impaired global myocardial contractility with ejection fraction of 50–52%. Exercise test (Bruce's protocol) did not reveal a limitation of exercise tolerance. Erosive gastritis was observed at esophagoscopy. Radiogram of the chest indicated degenerative changes of spinal column in the thoracic region. In laboratory tests there were no pathological changes of activity of liver enzymes, creatinine level, blood cell count, blood smear, sedimentation rate, electrolytes (sodium, potassium, total and ionized calcium), cholesterol level, glucose, urine analysis except for proteinuria at the level of 4,2 g/l (albumin 21,9%, β_1 globulin 78,1%) . We thought that the most likely reasons for patient's complaints were erosive gastritis and spondylosis. The patient was provided with appropriate drug treatment and discharged from the department with a strong suggestion for planned hospitalization within 4 weeks in order to perform further diagnostics of proteinuria. One month later the patient was admitted again for evaluation of nephrotic syndrome. Again we did not find any characteristic laboratory findings except for proteinuria at the level of 6,08 g/l (albumin 20,5%, β_1 globulin 70,4%). Sedimentation rate was 46 mm/h and 86 mm/2 h. The result of electrophoresis was in normal range (presented in table 1). We performed a renal biopsy which revealed no morphologic changes in limited number of glomeruli in tissue specimen. Even though we did not find any morphologic changes of the renal glomeruli we could not exclude the presence of glomerulonephritis. In the differential diagnosis we considered the thrombosis of renal veins as a reason for proteinuria especially as the patient suffered from thrombophlebitis of lower limbs. We suggested treatment with anticoagulants and invited him to follow-up an examination within 4 weeks. Two months later when admitted to the department, patient complained of severe pain in his back, progressive weakness, and weight loss (about 10 kg in the last 2 months). This time we found laboratory abnormalities as follows: proteinuria – 6,5 g/l, creatinine serum level – 2,95 mg/dl, ionized calcium - 1,99 mmol/l, sedimentation rate 100 mm/h. The result of electrophoresis was in normal range again (presented in table 1). Therefore free-light κ and λ chain assay was performed which did not reveal any abnormalities. Radiogram of the chest revealed compressive fractures of vertebra Th9, Th12. An examination of the bone marrow was performed and revealed plasmocyte infiltration (90% of plasma cells, 8% granulocytes, 2% erythroblasts). The final diagnosis was non-secretory myeloma. Patient was transferred for further treatment to the Department of Hematology.

Tab. I. The results of electrophoresis during hospitalization

Electrophoresis	2nd hospitalization	3rd hospitalization
Albumin	63,3%	65%
α_1 globulin	3,7%	3,4%
α_2 globulin	15,8%	14,8%
β_1 globulin	8,1%	8%
β_2 globulin	4,4%	4,3%
γ globulin	4,7%	5,3%

DISCUSSION

Multiple myeloma is the second most common neoplastic disease of lymphoid tissue in adults [2]. The median length of survival after diagnosis is approximately three years [1]. It is usually characterized by skeletal destruction, renal failure, anemia and hypercalcemia [3]. The most common symptoms on presentation are bone pain and fatigue [4]. As mentioned in this case report, our patient did not present with any of these typical findings when admitted for the first time. Moreover, none of performed diagnostic procedures and laboratory findings indicated multiple myeloma. Diag-

nostic criteria require a monoclonal protein in the serum or urine and evidence of end-organ damage [5]. We did not find any monoclonal proteins in serum or urine each time when the patient was hospitalized. We cannot explain the origin of proteinuria observed in our patient. Was it the influence of myeloma per se or was it a minimal changes glomerulopathy? We do realize that in a very rare cases patients may present without a detectable monoclonal protein but we did not have any clinical reason to suspect myeloma until the last hospitalization. When patient presented with back pain, weakness and weight loss that was associated with characteristic laboratory findings, the diagnosis was quite clear. Our suspected diagnosis was confirmed by a bone marrow biopsy result, that matched the criteria of at least 10 percent plasma cells. Despite the unusual course in this case, the diagnosis was established quickly enough to provide a proper treatment.

For the future we all should remember that occasionally patients do not match typical criteria necessary for diagnosing a disease.

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