Multiple myeloma in a 20-year-old patient: case report

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Abstract

The observation we report is that of a particular Kahler's disease by the young age of the patient (20 years at diagnosis), admitted for a melena induced by a Forrest IIc gastric ulcer caused by taking non-steroidal anti-inflammatory drugs for bone pain dating back two years. These pains, indicative of myeloma, were associated with a significant alteration of the general condition (body mass index at 12.5 kg / m²), infectious syndrome, paraparesis, and gibbosity. Treatment was palliative and the course fatal within two weeks.

Key words: Multiple myeloma of bones, Young adult, Africa

Introduction

Multiple myeloma is a haematological malignancy. It accounts for 1-2% of all cancers and 10-12% of haematological malignancies[1], and occurs with predilection in the second half of life. It is often unknown in young adults and its diagnosis is delayed at this age. Multiple myelomas in patients under 40 years of age accounts for 2% of all myeloma, and in patients under 30 years of age 0.3%[2]. Racial disparity influences the occurrence of myeloma[3,4].

Case report

The hospitalization of our 20-year-old patient was motivated by melena secondary to an ulcer induced by the use of nonsteroidal anti-inflammatory drugs for bone pain evolving for two years. A fibroscopy revealed a Forest type IIc gastric ulcer. The diagnosis of malignant bone tumour was evoked in front of the association with these inflammatory bone pains, a paraparesis at 3/5, a gibbosity in T9-T11, a massive alteration of the general condition (body mass index at 12.5 kg / m²), an infectious syndrome and radiographic images made of multiple osteolytic lesions to the dorsal and lumbar spine and costal arches. The diagnosis of myeloma was retained thanks to the myelogram which objectified 19% of dystrophic plasmocytes, despite the absence of monoclonal peak at protein electrophoresis. The light-chain character of myeloma was clarified by immunofixation. Beta-2microglobulinemia was 1.99mg/l, and protein was 64g/l (albuminemia at 38.0% and gamma globulinemia at 33.8%). The remaining tests resulted in biological inflammatory syndrome (sedimentation rate at 143mm at the first hour, haemoglobin at 4.6g/dl, thrombocytopenia at 20000/µl), and renal function (creatininemia at 6mg/l), serum calcium (106mg/l) and phosphoremia (28mg/l) normal. The patient's clinical condition and biological disorders made it impossible to administer the treatment, usually consisting of courses of melphalan, prednisone and thalidomide. Marrow transplantation is not possible in our operating conditions. We then settled for palliative treatment (transfusion of 8 isorhesus group blood bags, triple antibiotic therapy, level 2b analgesic and bisphosphonates) and death occurred after two weeks.

Discussion

Multiple myeloma is a haematological malignancy. The risk of myeloma increases with age and this risk is higher in men than in women. The median age of patients at diagnosis is approximately 65 years[1]. It is twice as common in African Americans as in Caucasians[3,4]. It is rare in people under 30 - 40 years old. The study by Bladé *et al*[2] showed that out of 3,278 patients, the frequency of multiple myeloma in patients under 40 and under 30 years of age is 2.2% and 0.3% respectively.

The semiological particularities of myeloma in young subjects are the predominance of the light-chain form and the higher frequency of osteolytic lesions. This was the case with our patient. Several studies have shown a similarity of clinical and morphological characteristics at all ages except that myeloma in young subjects is light chain[5-8], like the reported case. Radiologically, our patient suffered staged vertebral fractures and multiple geodes, which corroborates the high

frequency of lytic bone lesions in very young patients, especially those under 30 years of age. Two studies[9,10] showed bone lysis in almost all cases with femoral and vertebral fractures in 28.5%.

A characteristic of the reported case is prognosis: the course was fatal despite the presence of good prognostic factors (renal function and low beta 2-microglobulin levels). The Mayo Clinic study found kidney failure and hypercalcemia in 29% and 30% of 72 patients, respectively[2], unlike more recent patients who did not report any of these complications[5].

Survival is longer than that of older patients, especially those with good prognostic factors (normal renal function or low beta-2-microglobulin levels) and also in those under 30 years of age[11,12.] Unlike the reported case, the presence of good prognosis factors did not correspond to long survival[13]. Aggressive course has been reported in cases of young patients[6]. The clinical course of our patient was aggressive. The delay in diagnosis and especially the precancerous phase was more frequent in blacks than in whites according to the data of the literature[14-17] could be the cause of this aggressiveness.

Conclusions

The average age of myeloma is 65 years, it increases with age, rare before the age of 30 years. The clinical and biological characteristics in the elderly do not differ significantly from the elderly. The reported case was mainly a victim of delay in diagnosis, the disease not often being mentioned in young subjects.

Declarations: The authors declare no competing interests.

The national ethics committee made no objection or reservations after analysing this article.. They have therefore given their approval for its publication.

The deceased patient's consent was obtained verbally by his illiterate mother.

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