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Liver nodules and acute renal failure in multiple myeloma Revealed

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ABSTRACT

Extramedullary involvement in myeloma is very rare, especially liver involvement .Extramedullary involment may be the result of a plasma cell infiltration, deposits of light chains(by analogy to renal tubulopathy) or ALamyloidosis associated with my eloma.Hepatomegaly can be observedin POEMS syndrome (polyneuropathy, organomegaly, endocrinopathy, monoclonalgammopathy, and skin changes)[1].We report the case of a patient aged 52,admitted for asthenia, palor, and hepatomegaly as primary manifestations of multiple myeloma and in whom the diagnosis of multiple hepatic nodules secondary to myeloma was made.

Keyword : Multiple myeloma - liver nodule - acute renal insufficiency.

INTRODUCTION

Multiple myeloma is within the scope of lymphoid malignancies according to the WHO classification (2001) [1].It is a disease that affects primarily the skeleton, which is usually associated with bone pain. However, multiple myeloma may be asymptomatic or start with less obvious manifestations such a s recurrent infections, anemic syndrome, renal failure, neurological symptoms, pathologic fractures or extramedullary involvement. There are few studies on the incidence, prognosis and treatment of extramedullary involvement in multiple myeloma, especially liver involvement.

We report the observation of a specific multiple myeloma case revealed by an inaugural hepatomegaly and kidney failure.

MATERIALS AND METHODS

Observation:

We report the case of Mr. M.Haged 52, without specific medical history, admitted to emergency department for abdominal pain and asthenia since 3 weeks.Physical examination revealed mucocutaneous pallor and hepatomegaly measuring 16 cm and of nodular surface and soft edge without splenomegaly or lymphadenopathy or bonepain.

Laboratory tests on admission showed a normochromic normocytic anemia 8g/dl, renal insufficiency 125 mg/l, hypercalcemia to 187 mg/l with aninflammatory undisturbed by the liver syndrome. Abdominal ultrasound revealed hepatomegaly with multiple hyper-echoic heterogeneous

hepatic probably secondarynodules, variable in size.

During evolution, the patient presented with diffuse bone pain of four members.The radiological assessment showed multiple lacunar images in the pelvis and the skull being strongly suggesting the diagnosis of multiple myeloma(Picture1).

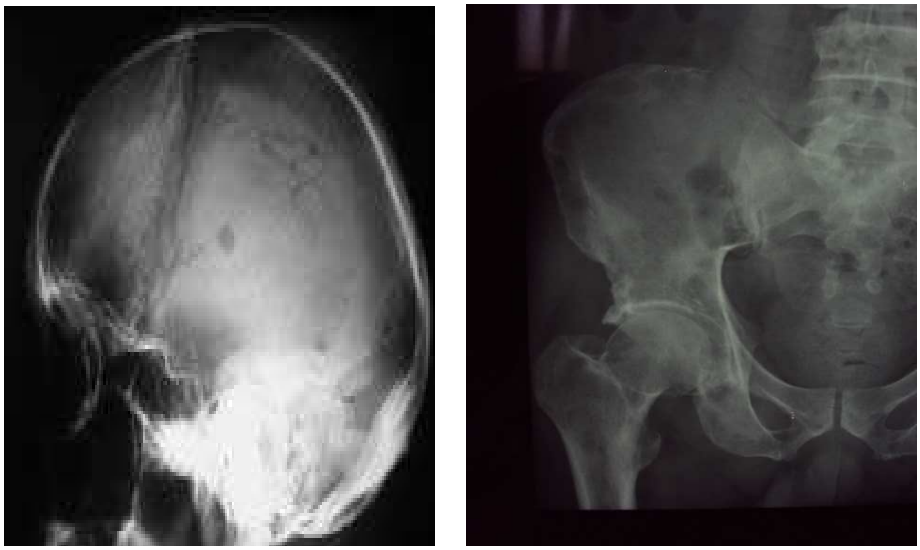

Image 1: osteolytic lesions at the skull and pelvis.

Electrophoresis of plasma protein objectified monoclonal peak of immunoglobulins associated with BenceJones proteinuria.The diagnosis of Kappa light chains myeloma was discussed and confirmed by immunoelectrophoresis and myelogram.

Scannographic exploration of liver nodules found several images located in the liver parenchyma, isodense, and which the periphery was enhanced after injection of contrast material probably secondary.

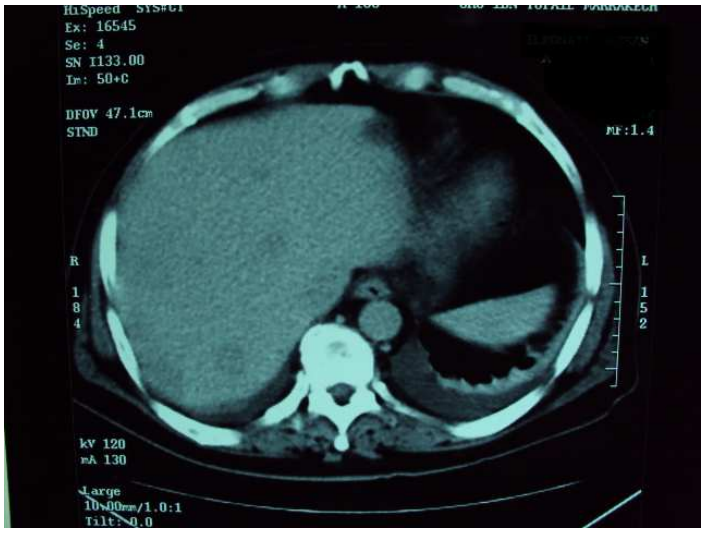

Image 2: An abdominal CT objectifying hepatic nodules.

The colonoscopy, gastroscopy, and tumor markers were negative. A liver biopsy was not performed due to the bleeding disorders presented by the patient.Therefore, the diagnosis of multiple myeloma

stageIII B according to Durie and Salmon [2] Classification was made with a probable hepaticlocalization.

The patient received chemotherapy regimen containing melphalan-prednisone (MP) at a dose of

0.25mg/kg melphalan and 2 mg/kg day_1-day_4 of oral prednisone but without clinical or laboratory improvement. Cyclophosphamide-based chemotherapy - thalidomide-dexamethasone (CDT) was then started in the following way: cyclophosphamide 350 mg / m² to day_1, day_8, day_{15} and day_{22}, thalidomide 100 mg/day once-a-day evening, and 40 mg of dexamethasone,from day_1 to day_4, day_9 to day_{12} and day_{17} to day_{20}.

The evolution has been marked after two courses of CDT, with improvement of the general condition, the negativity of proteinuria, and the disappearance of liver images ultrasound control confirming the origin of myeloma nodules.On the renal level, there has been no improvement in renal function with serum creatinine figures around 90 mg/l requiring hemodialysis. Electrophoresis of plasma proteins and bone marrow aspiration were planned after the third course of chemotherapy, but the patient died secondary to severe sepsis.

Discussion:

The incidence of multiple myeloma is 4 per 100,000 per year. In the majority of cases, the multiple myeloma manifest after 40 years. The age of on set of the disease in this observation (52) is consistent with the literature [3].

It is a condition characterized by the expansion of a B-cell clone in a terminal stage of differentiation with production of a monoclonal immunoglobulin. [4] It represents about 10% of hematological cancers, which is the second in order of frequency after lymphomas [5].

The clinical presentation of multiple myeloma is often varied; bone pain is the most frequent symptom of appeal. The extra bone lesions and extra medullary myeloma are rare events and occur mainly during the course of the disease. There are few series on the incidence, prognosis and treatment of these locations, their prevalence varies across studies and the appearance of this type of injury is often a problem in clinical practice, including that of the choice of therapeutic to offer.

While at the postmortem biopsy, hepatic plasma cell infiltration has been described in a significant proportion of patients, hepatomegaly or a disturbance of liver function at diagnosis has been described in rare cases.

A study in North CHU Amiens described six extra-medullary bone locations and extra-multiple myeloma over 10 years is only one liver [6].The particularity of our observation is the presence of hepatic localization in a patient of 52 years and whose disease was inaugurated by acute renal failure. A typical presentation of the cases of multiple myeloma often pose a diagnostic difficulty. However, the presence of a monoclon alimmuno globulin peak with spinal cord plasma cell infiltration and the disappearance of liver nodules chemotherapy strongly evoke a myeloma origin.

Extra medullary involvement in multiple myeloma is rare, described in 70% of autopsies [2] and liver damage in 35% of post mortem biopsies [7]. The later is suspected in jaundice, liver enlargement, portal hypertension or elevated liver enzymes [2]. In a study of 869 patients with multiple myeloma, nine patients had hepatomegaly [8].

Histologically, there is plasma cell infiltration, amyloidosis or myeloid metaplasia. However, liver biopsy is not always indicated as the therapeutic arsenal remains unchanged.

The choice and modalities of initial chemotherapy before a MM with renal failure remain unclear. Patients with renal failure are excluded in almost all randomized studies of the literature.

Despite the gravity of liver involvement, our course of action did not require a change in the therapeutic management. Our patient received two courses of chemotherapy cyclophosphamide-thalidomide-dexameth as onekind.

The discovery of new agents such as proteasome inhibitor bortezomib and immunomodulators thalidomide and lenalidomide, represents real progress in the treatment of myeloma. After significantly improved the prognosis of myeloma in an advanced phase,they radically transformed the initial treatment of this condition; the introduction of the seagents in the induction treatment, conditioning intensification and post-transplant treatment leaves hope for an improvement in overall survival in young patients by increasing the rate andquality of responses.

If healing of myeloma remains illusory, it is possible to live longer with this blood disease outside chemotherapy complications, as was the case in our patient.

CONCLUSION

Extramedullary involvement in myeloma is still rare and often causes problems in the diagnosis and management. Early diagnosis is the cornerstone of the treatment under close examination and paraclinical follow up. There are few studies on liver involvement in myeloma. Thus, multiple myeloma remains a multidisciplinary approach to disease for the diversity of the clinical presentation, so many authors are involved whether hematologists, oncologists, nephrologists, biologists, internists or gastroenterologists.

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