

Monoclonal gammopathy in human leishmaniasis

M.L. Randi*, E. Ruzzon, F. Tezza, E. Pacquola, F. Fabris

Department of Medical and Surgical Sciences, Internal Medicine, University of Padua Medical School, Padua, Italy, *corresponding author: tel.: +39 (0)49-821 26 68, fax: +39 (0)49-821 13 91, e-mail: marialuigia.randi@unipd.it

ABSTRACT

A 64-year-old female with IgGκ monoclonal components (total 45 g/l) and 30% abnormal plasma cells and plasmoblasts in bone marrow is reported. After the identification of leishmania in the bone marrow, liposomal amphotericin B was used and a progressive resolution of the gammopathy was documented.

KEYWORDS

Monoclonal gammopathy, visceral leishmaniasis

INTRODUCTION

Visceral leishmaniasis, a parasitic disease, is usually considered a typical infantile syndrome with a high incidence in southern Italy; however, the occurrence of the disease has recently been observed in immunocompetent adults as well. The detection of monoclonal components is exceptional in patients with visceral leishmaniasis.^{1,2} In contrast, monoclonal alterations of immunoglobulins are common in canine leishmaniasis.³

CASE REPORT

We report a case of visceral leishmaniasis and monoclonal components observed in our department during the spring of 2003.

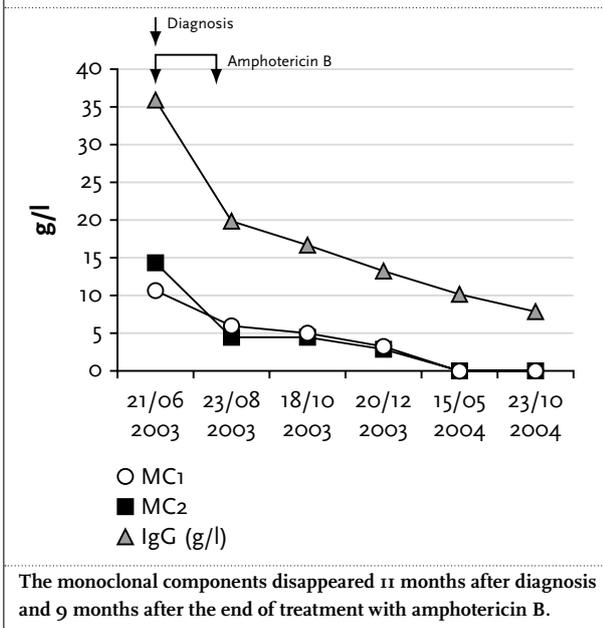
A 64-year-old woman with a history of intermittent fever (over 38°C) and headache within the last eight months was admitted in our department. She was complaining of general discomfort, fatigue, loss of appetite and recent weight loss (about 2 kg in two weeks). Her personal history was not significant, the only relevant data being trips to

Morocco (2000), Egypt (2001) and Russia (2002) and a holiday in south-eastern Italy ten months previously. Physical examination failed to demonstrate enlarged lymph nodes, but liver and spleen were palpable. The laboratory data showed mild normochromic normocytic anaemia (haemoglobin 6.6 mmol/l, MCV 89 fl), mild thrombocytopenia ($130 \times 10^9/l$), slightly decreased white blood cell count (total $3.9 \times 10^9/l$ neutrophils 47% lymphocytes 40%, monocytes 8% and eosinophils 5%), a relevant increase in ESR (102 mm/h) and CRP (108.5 mg/l). The total proteins were very high (107 g) and protein electrophoresis showed an increase in gammaglobulins (45 g/l) with 2 IgGκ monoclonal components. The Bence-Jones protein was undetectable, while β_2 -microglobulin was higher than normal (3955 mg/l). A multiple myeloma was considered⁴ and a bone marrow aspirate together with bone marrow biopsy performed. Abnormal plasma cells and plasmoblasts representing more than 30% of all marrow cells were observed confirming the clinical hypothesis. However, the presence of parasites was documented.⁵ The definitive diagnosis was reached by a positive *Leishmania infantum* serological test (immunofluorescent antibody test). The patient was treated with liposomal amphotericin B for three weeks (total dose 1225 mg) with a prompt resolution of symptoms; the hepatosplenomegaly disappeared within five months. An initial decrease in monoclonal IgGκ was observed, but a completely normal level was only achieved after 12 months. The recovery of normal blood parameters was observed at the same time (figure 1).

DISCUSSION

Previous case reports indicate that visceral leishmaniasis can be misdiagnosed as myeloma,^{1,2} mixed cryoglobulinaemia⁶ and malignant lymphoma,⁷ so great attention

Figure 1. Immunoglobulin (IgG) total dosage and single monoclonal component (CM) concentration at diagnosis and during the follow-up



needs to be paid to patients who have travelled in a risk area and who develop a rapid increase in paraproteins. In our case, the travel in southern Italy in a three week to 18 month period before the symptoms developed should suggest a parasitic origin of the disease. It is important to underline that the extremely long duration of the monoclonal IgG component in our patient, even after a complete recovery of the symptoms and

disappearance of positive serological data, may also occur in some patients with unrecognised leishmaniasis which resolves spontaneously.⁸ The annual incidence of visceral leishmaniasis in Italy is considered to be about 30 to 50 cases, but is probably greatly underestimated.⁹ Therefore, it is important to be aware that acute development of monoclonal paraproteins may be related to a parasitic infection rather than a myeloma.

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