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SHORT REPORT

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Visceral leishmaniasis in a patient with Down syndrome

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Visceral leishmaniasis (VL) due to *Leishmania infantum* is a vector-borne zoonotic disease endemic in Sicily. We report on a case of VL that occurred in a child with a cardiopathic condition and Down syndrome.

In January 2005 a 6-month-old child with Down syndrome underwent a surgical intervention for congenital cardiopathy. Two months later the child returned to the paediatric cardiosurgery department with a 5-day history of fever. At admission, the patient was febrile, pale, with rare petechial lesions. A greatly enlarged and hard spleen was observed. Laboratory examination revealed pancytopenia and high gammaglobulin value. An immuno-fluorescence antibody test (IFAT) for *Leishmania* spp. detected the presence of anti-*Leishmania* antibodies. Bone marrow microscopy and polymerase chain reaction (PCR) revealed the presence of *Leishmania* parasites. Treatment with intravenous liposomal amphotericin B at a dose of 3 mg/kg per day was administered for 10 consecutive days. Defervescence was obtained after 3 days of treatment.

At the end of therapy splenomegaly and hepatomegaly were reduced, haematological values were improved and anti-*Leishmania* antibodies (by IFAT) were undetectable.

To our knowledge this is the first reported case of VL in a patient with chromosome 21 trisomy. Down syndrome is associated with different immune dysfunctions, which have been correlated to a general predisposition to infection [2, 4, 6]. Moreover, our patient was convalescent from major surgery, and this might have lead to further immuno-deficiency. In spite of these aggravating factors the patient showed a typical clinical presentation and recovered in a way that any child with immuno-competence would normally recover. Undoubtedly, early diagnosis had an important role in the good outcome of the disease in our patient. The proven efficacy of liposomal amphotericin B in immuno-deficient subjects [3, 5] and the lack of cardiac side effects, already reported in a patient with Down syndrome treated with meglumine antimoniate [1], are the most important advantages of this therapy, especially in a patient with a cardiopathic condition. In conclusion, we stress the need for the paediatrician to consider VL in Down syndrome children living in endemic areas so as to avoid misdiagnosis (immunological or neoplastic diseases) and, consequently, the wrong treatment, such as steroid therapy, which would make worse the clinical course of leishmanial infection.

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