

A Visceral Leishmaniasis Case from the Black Sea Region: Skin Lesions and *Leishmania donovani* Amastigotes in the Bone Marrow

Karadeniz Bölgesinden Bir Visseral Leishmaniasis Olgusu: Deri Lezyonları ve Kemik İliğinde *Leishmania donovani* Amastigotları

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Figure 1. Widespread erythematous and indurate skin lesions.



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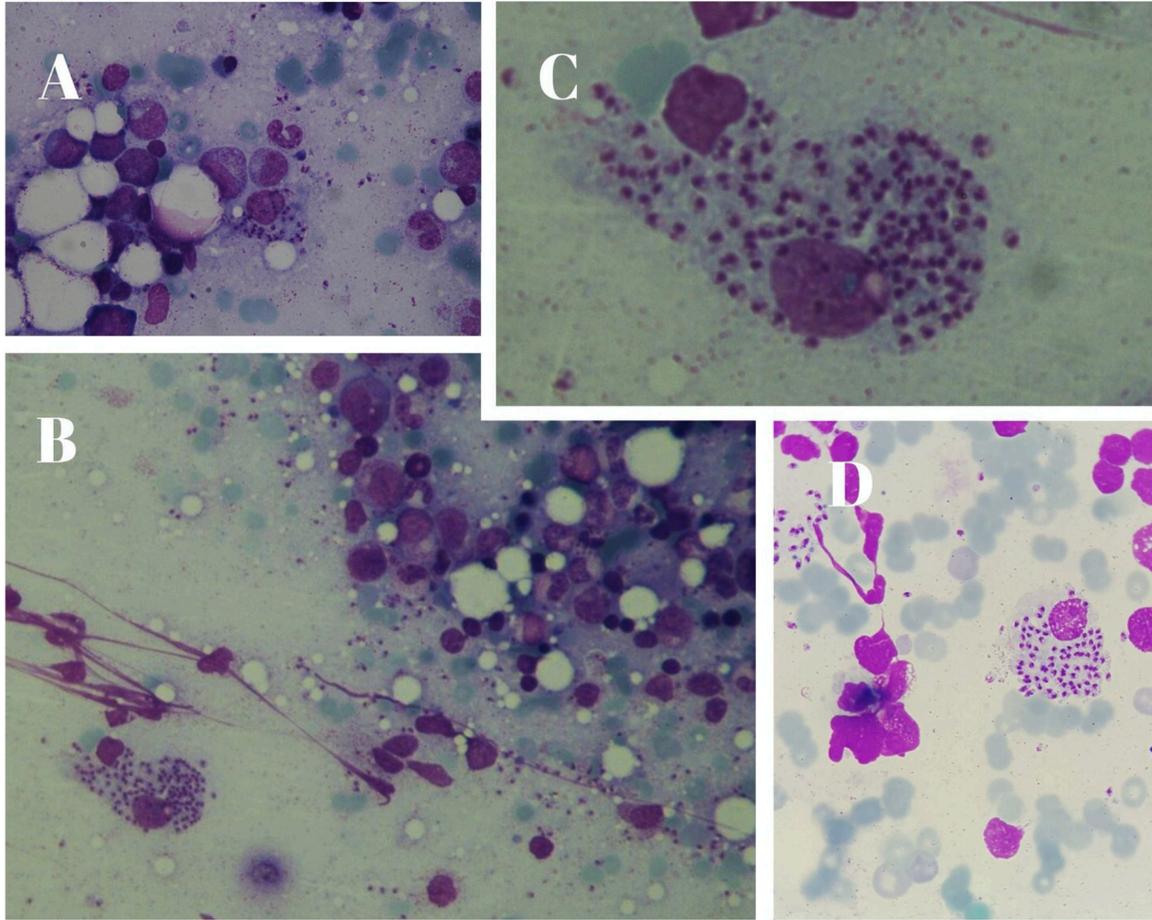


Figure 2. Bone marrow aspirates were hypercellular and numerous *Leishmania donovani* amastigotes characterized by a double-dot appearance were seen in histiocytes and the extracellular field.

A 42-year-old female patient was admitted to the hospital with fatigue, non-productive cough, and pancytopenia. She was started on ambulatory methylprednisolone treatment considering autoimmune cytopenia but was referred to our clinic due to additional fever and skin lesions. Physical examination revealed fever (39 °C), widespread erythematous and indurate skin lesions (Figure 1), and hepatosplenomegaly (liver: 22 cm, spleen: 21.5 cm). In addition to pancytopenia (white blood cells: $0.5 \times 10^3/\mu\text{L}$, neutrophils: $0.13 \times 10^3/\mu\text{L}$, hemoglobin: 6.6 g/dL, platelets: $10 \times 10^3/\mu\text{L}$), elevated levels of lactate dehydrogenase (478 IU/L), ferritin (>2000), and inflammatory markers were remarkable in laboratory examinations. Bone marrow aspirates were hypercellular and numerous *Leishmania donovani* amastigotes characterized by a double-dot appearance were seen in histiocytes and the extracellular field (Figure 2). With a diagnosis of visceral leishmaniasis, liposomal amphotericin B treatment was begun and her fever decreased within a few days. Her blood count was normal and both liver and spleen were non-palpable at the end of the month. Further serological investigations and polymerase chain reaction studies identified *Leishmania infantum* in both bone marrow and skin samples.

Visceral leishmaniasis is sporadically seen in Türkiye with a total incidence of 25-30 patients per year mainly in the Aegean, Mediterranean, and Central Anatolian regions [1]; it is very rare in the Western Black Sea region. Our patient did not have a history of traveling outside the province in the last 6 months, and to our knowledge, this is the second case reported from Zonguldak [2]. However, it has been reported that the distribution of the disease may change with the increase in refugees [3]. It is important to detect amastigotes in the bone marrow aspirates of patients presenting with cytopenia and splenomegaly, especially since it is known that symptoms such as fever may develop late or be insignificant.

Keywords: Visceral leishmaniasis, *Leishmania donovani* amastigotes, Bone marrow

Anahtar Sözcükler: Visseral leishmaniasis, *Leishmania donovani* amastigotları, Kemik iliği

Ethics

Informed Consent: An informed consent form was obtained from the patient.

Authorship Contributions

Surgical and Medical Practices: B.Ö.; Concept: B.Ö., C.E.Ö., A.Y.; Design: B.Ö., C.E.Ö., A.Y.; Data Collection or Processing: B.Ö., C.E.Ö., A.Y.; Analysis or Interpretation: B.Ö., A.Y.; Literature Search: B.Ö.; Writing: B.Ö., C.E.Ö., A.Y.

Conflict of Interest: No conflict of interest was declared by the authors.

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References

1. Ok UZ, Balcioglu IC, Taylan Ozkan A, Ozensoy S, Ozbel Y. Leishmaniasis in Turkey. *Acta Trop* 2002;84:43-48.
2. Öztoprak N, Aydemir H, Pişkin N, Keskin S, Arasli M, Gökmen A, Çelebi G, Uğur K, Taylan Özkan H. An adult case of visceral leishmaniasis in a province of black-sea region, Turkey. *Mikrobiyol Bul* 2010;44:671-677.
3. Üner S, Okyay P (eds). *Türkiye Sağlık Raporu 2020*. Ankara, Hipokrat Yayınevi, 2020.