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# Fever of Unknown Origin and Visceral Leishmaniasis: a Series of 20 Adult Patients

## Nedeni Bilinmeyen Ateş ve Visseral Layşmanyaz: 20 Erişkin Hastadan Oluşan Olgu Serisi

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### SUMMARY

*Visceral Leishmaniasis (VL) is a parasitic disease frequently seen in Mediterranean countries, including our country, which still constitute a major public health problem. In this study, it was aimed to investigated retrospectively 20 cases diagnosed with visceral leishmaniasis (VL) among the cases referred from different clinics/centers for further examination to our department due to fever of unknown origin in terms of demographic characteristics, underlying diseases, laboratory, clinical data and treatment results between 2007-2017. Adults with chronic systemic diseases are always at risk in endemic regions and VL should be considered in differential diagnosis, particularly in cases of fever of unknown origin.*

***Key Words:*** *Visceral leishmaniosis; Hepatosplenomegaly; Fever*

### ÖZET

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***Giriş:*** *Visseral layşmanyaz (VL), ülkemizin de içinde bulunduğu Akdeniz ülkelerinde sıklıkla görülen, halen önemli bir halk sağlığı sorunu olmaya devam eden paraziter bir hastalıktır. Bu çalışmada, 2007-2017 yılları arasında başka merkezlerden ileri tetkik amacıyla hastanemiz değişik kliniklerine yönlendirilen, uzun süreli ateş yüksekliği yakınması olan olgulardan yapılan incelemeler sonucu VL tanısı alan 20 olgu demografik özellikler, altta yatan hastalıklar, laboratuvar, klinik veriler ve tedavi sonuçları açısından retrospektif olarak değerlendirilmiştir. Kronik sistemik hastalıkları olan yetişkinlerde endemik bölgelerde her zaman VL riski altındadır ve ayırıcı tanılar arasında özellikle uzun süreli ateş yüksekliği olan olgularda VL akla gelmelidir.*

***Anahtar Kelimeler:*** *Visseral layşmanyaz; Hepatosplenomegali; Ateş yüksekliği*



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Dear Editor,

Visceral leishmaniosis (VL), also known as kala-azar, is a disease primarily caused by *L. donovani* and *L. infantum* (synonym *L. chagasi*), which are transmitted by female sand flies. There are 500.000 new VL cases and 59.000 (35.000 male and 24.000 female) global mortality estimated per year[1]. Clinical manifestations of VL vary from asymptomatic infection to a life-threatening disease that can be highly fatal unless treated. It shows characteristic symptoms such as fever, hepatomegaly, splenomegaly, weight loss and bone marrow suppression[2]. VL remains to be an important public health problem predominantly seen in the Indian subcontinent, East Africa, Central Asia, Middle East, Brazil and Mediterranean countries including Turkey[3,4]. A total of 2908 VL cases were reported in Turkey between 1995 and 2007[5]. When the etiology of fever is investigated, VL is a disease that should be considered in differential diagnosis including hematological malignancy and tuberculosis[6,7].

VL is traditionally more prevalent in children than in adults in the Mediterranean Basin[8]. We aimed to investigate the clinical and laboratory characteristics of patients diagnosed with VL among cases who were referred from different clinics/centers for further examination to our department due to fever of unknown origin retrospectively. Twenty patients diagnosed with VL while being evaluated for FUO (according to Petersdorf and Beeson criteria) were included into the study between 2007-2017 and were examined retrospectively in terms of demographic characteristics, underlying diseases, laboratory, clinical data and treatment results.

Our study included 20 subjects (6 females, 14 males). Mean age of the patients was 46.79 ± 15.99 years (range 23-74). VL was diagnosed in all patients by demonstrating Leishmania amastigotes in the bone marrow biopsy material. Hepatomegaly and anemia were detected in 90% (18 cases), leucopenia in 85% (17 cases), pancytopenia and thrombocytopenia in 65% (13 cases) of the cases, while all patients had fever (range three weeks-a year) and splenomegaly. All the patients had been admitted to different hospitals before having received VL diagnosis. Twelve patients (60%) were prediagnosed as haematological malignancy, three patients (15%) as urinary tract infection, one patient (5%) as influenza and four patients (20%) had no prediagnosis before being referred to our hospital. Eight of the patients (40%) had concomitant diseases that could lead to confusion in clinical diagnosis such as cirrhosis, hematological malignancy, tuberculosis, and chronic kidney disease. Seventeen patients were treated with liposomal amphotericin B, and two patients were treated with meglumine antimoniate. One patient with pulmonary tuberculosis was discharged from the hospital without treatment of VL. Four of the patients died due to other causes (candidemia, pneumonia, myocarditis and cirrhosis) while one patient also died due to complications of bleeding due to VL.

VL is one of the neglected vector-borne diseases in the world, especially in developing countries that can mimic hematologic malignancies. In our case series, 60% of the patients were diagnosed as hematologic malignancy. It can also be seen that there may be a co-infection of VL together with various diseases suppressing immunity. A case of FUO diagnosed as VL concomitant with diffuse B cell lymphoma has also been published by our group[9].

Although VL is predominantly seen in Mediterranean countries during childhood, adults with chronic systemic diseases are always at risk in endemic regions and VL should be considered in the differential diagnosis, particularly in cases of fever of unknown origin.

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