This article describes the case of fever of unknown origin in an infant. During examination of the girl no markers of leishmaniasis were detected. However, considering her recent visit to the tropical country and the typical clinical presentation, the doctors of Turkish clinic *Acibadem Atakent Hastanesi* in which the child was treated, suspected leishmaniasis. The child was treated with *AmBisome*® preparation, the result showed positive clinical effect. At this point, 6 months later the child became clinically and laboratory healthy.

Past medical history of the girl (1year 7 months old) showed growth and development according to age, appropriate vaccination and absence of any surgery, allergic reactions or blood transfusions.

Current illness history of the child showed that she returned 2 month ago from Brazil, Minas Gerais, where she had spent 6 months with her biological parents. In Brazil the child was bitten by mosquitoes and had once a cold.

Previously healthy, the child developed hectic fever which was poorly controlled with antipyretics and stunning chills. During one week the parents treated the child at home, following appointments of GP. As treatment was not effective, the child was hospitalized and examined with laboratory and instrumental methods.

The examination revealed pancytopenia (anemia, leukopenia, thrombocytopenia), increase in markers of systemic inflammatory response, as well as spleen and liver enlargement. The child was tested for HIV and malaria with negative results. Further bone marrow investigation was done which excluded oncologic pathology. Leishmania have not been found in the sternal punctate.

Examination and follow-up of the child was done during 21 days in Ukraine. During this period the child received 3 different broad spectrum antibiotic courses. However, in spite of the treatment the child's condition progressively deteriorated: pancytopenia and acute inflammation proteins concentration increased.

Despite the fact that during examination the child had not been identified any markers of autoimmune disease (ANA and AMA), the child was diagnosed by Ukrainian doctors with the debut of a systemic connective tissue disease. The proposed method of treatment was corticosteroids or homologous immunoglobulin for intravenous administration.

The parents refused further treatment in Ukraine and on the 21st day of the disease the child was transported to Turkey, to the clinic *Acibadem Atakent Hastanesi*, where she has been re-examined.

Bacteriological examination of blood, feces and nasopharyngeal swab were conducted, as well as serological survey for Salmonella typhi and paratyphi, Brucella, Borrelia burgdorferi, immunological examination (immunoglobulins M, G, A), sternal puncture. During examination no cause of the fever was detected. Besides, no Leishmanias were detected in bone marrow. The genetic

material of Leishmania was not detected. During the survey the child received the fourth course of a broad spectrum antibiotic.

On the 22nd day of the disease child's anemia reached a dangerous level (66 g/l) that required blood transfusion. Then, on the 28th day of the illness there was a Skype consultation with Brazilian doctors who suspected the girl to have visceral form of leishmaniasis of the New World. Despite the absence of any laboratory confirmation of the diagnosis as a trial treatment liposomal amphotericin B - *AmBisome*® was administered. On the second day of the treatment with this drug the child's condition improved significantly, body temperature returned to normal, appetite appeared. Treatment with *AmBisome*® lasted for 7 days, during which the child received a total dose of 21 mg/kg. By the end of the treatment laboratory parameters significantly improved: number of blood cells increased, concentration of acute phase proteins in blood reduce. The child was discharged from the hospital in satisfactory condition.

Right after arriving back to Ukraine and 2.5 months after beginning of the disease the child was performed the analysis to determine IgM and IgG antibodies to Leishmania with negative results.

Analyzing the case, it should be noted that the semiotics of child's disease are similar to that of the clinical diagnosis of fever of unknown origin, which is defined as a pathological condition, the main manifestation of which is the increase in body temperature $\geq 38.3^0$C for 3 or more weeks, the cause of which remains unknown after inspection by conventional (routine) diagnostic methods. However, epidemiological history is required to be properly confirmed by clinical signs, instrumental, laboratory and specific parasitological research. It should be noted as well that the most vulnerable to infection with visceral leishmaniasis among children are infants on every continent.

In favor of leishmaniasis it should be noted that to obtain laboratory confirmation of leishmaniasis in this case was unlikely for several reasons. Serology to Leishmania gave a negative result because in Eurasia clinical laboratory diagnosing test systems are based on antigens of leismaniasis of Old World. The DNA test might have been negative due to the same reason. And third, the sensitivity of Leishmania detection in bone marrow biopsies is only 53-86% (for comparison, from spleen aspirate it is 93-99%). It is also and highly dependent on laboratory worker experience and dye quality.

Thus, in the presence of fever of unknown origin, screening to leishmaniasis is reasonable, especially for patients who attended subtropical or tropical regions. Presented clinical case should be considered as a probable case of visceral leishmaniasis of the New World, based on the epidemiological history, prolonged fever with symptoms of hepatosplenomegaly and anemia, effectiveness of anti-parasitic chemotherapy with liposomal amphotericin B.