Kala-azar in a Brazilian child

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Abstract

We report the case of a six-year-old Brazilian girl referred for splenomegaly who first presented with fever, asthenia, and weight loss. Geographical location, clinical exam, and blood laboratories suggested kala-azar. Serology confirmed kala-azar diagnosis, but direct evidence of the parasites was not made. A treatment by meglumine antimoniate is given under hospital surveillance for two weeks. Thereupon, the patient is asymptomatic and all tests are normal.

Case Report

The female child is six-years-old and comes from Fortaleza in the state of Ceara in Brazil. Initial symptoms began six months ago and included fever, asthenia, and weight loss. The patient had been examined by various general practitioners without diagnosis. She is referred because of increasing splenomegaly. The patient’s clinical exam reveals pale skin and malar flush. Blood pressure is 90/60 mmHg. Pulse is 114 beats/min. She is 1.10 m tall and weighs only 17 kg. Abdominal exam reveals dis- creet portacaval venous flow with no signs of hepatocellular insufficiency. Liver is enlarged, non-tender, and smooth. Spleen is stage 5 hypertrophied. The patient has enlarged inguinal lymph nodes. The remainder of the physical exam is non-contributory. Tests' findings include: CBC: Normochromic and very microcytic anemia (Hb: 7.1 g), leucopenia (3,300 WBC), and thrombopenia (70,000 platelets/mm³); ESR: 77 mm for first hour; serology of leishmaniasis: positive (1/160 using rk39 dipstick test). ELISA is widely performed, particularly in epidemiological studies, because it is very simple. Anemia secondary to kala-azar is regenerative because of bone medullar parasitic invasion. Even without direct evidence of leishmania, this child’s poor health condition coupled with the epidemiological, clinical, and biological presentations called for immediate treatment. In Brazil, the etiological agent of kala-azar is Leishmania donovani.11 Without treatment, kala-azar can result in death within weeks to months.12,13

Diagnosis

Although not performed in the case report, protein immunoelectrophoresis reveals hypergammaglobulinemia with an IgG peak in patients with kala-azar.3 Serological tests, which are useful for the diagnosis of kala-azar, include ELISA (enzyme linked immunosorbent assay), direct agglutination test (DAT), indirect fluorescent antibody test (IFAT), and the rk39 dipstick test. ELISA is widely performed, particularly in epidemiological studies, because it is very simple. Anemia secondary to kala-azar is regenerative because of bone medullar parasitic invasion.10 Even without direct evidence of leishmania, this child’s poor health condition coupled with the epidemiological, clinical, and biological presentations called for immediate treatment. In Brazil, the etiological agent of kala-azar is Leishmania donovani.11 Without treatment, kala-azar can result in death within weeks to months.12,13

Treatment

Side-effects of this case’s treatment drug of choice, meglumine antimoniate, include the following: i) Intolerance that usually appears after the first injections and consists of fever, chills, cough, myalgia, and/or skin rash. Treatment discontinuation is mandatory if such intolerance occurs; ii) Intoxication resulting in fever, cough, skin rash, polyneuritis, hepatitis, cardiac, and renal signs. Alternative treatments for kala-azar include sodium stibogluconate, amphotericin B, liposomal amphotericin B, pentamidine, and paromycin.14-16

References

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