Visceral Leishmaniasis in Sindh

Nazir Ahmed Malik,Tahir Jamil (Departments of Pediatrics and Hematology, PNS Shifa, Karachi.)

Introduction

Only a few studies have been carried out to know about the epidemiology of viscera! leishmaniasis in Pakistan. These studies revealed that this disease is prevalent only in the northern areas including Azad Kashmir, Gilgit, N.W.F.P and some vi!lages around Murree, Rawalpindi and Abbotabad[1-3].
We have diagnosed a case of visceral leishmaniasis, a child from interior Sindh (District Khairpur). It is probably the first case being reported from interior Sindh in Pakistan.

Case Report

A 13 months old male child who was born and lived in Thari Mir, Wah, District Khairpur presented with history of low-grade intermittent fever and gradual pallor over past 2 months. On examination, the child was severely malnourished (weight 6.4 kg), markedly pale and had marked hepatosplenomega!y (liver 5 cm, spleen 6 cm). Rest of the clinical examination was unremarkable. His investigations revealed leukocytosis (TLC 1 7500), severe anemia (Hb 2.7 gm/dl), normal platelet and reticulocyte count. Peripheral smear revealed anisopoikilocytosis, m icrocytos is, hypochromia, polych romasia and nucleated RBCs. No malarial parasite was seen. His Hb electrophoretic studies were normal (Hb A-I 97.2%, Hb A-2 2.2%). Serum ferritin was 359 ng/ml. Bone marrow examination revealed presence of intra and extra cellular L.D bodies, which confirmed the diagnosis of visceral leishmaniasis.
The child was put on injection glucantime 20 mg/kg I/M daily for 4 weeks along with supportive measures including RCC transfusion and nutritional rehabilitation. After 4 weeks of treatment the child became asymptomatic, showed weight gain and regression of hepatosplenomegaly. His bone marrow examination was normal and no LD bodies were detected.

Discussion

Viscera! leishmaniasis (VL) is a chronic parasitic disease caused by Leishmania: Donovani complex; L. Donovani Donovani, L. Donovani Infantum, L. Chagasi, which affects the reticulo endothelial system mainly liver, spleen, bone marrow and lymph nodes[4]. It is transmitted by sandfly vector Phlebotomus. The main reservoirs are human beings, wild and domestic animals. Visceral leishmaniasis is endemic in tropical and sub-tropical regions of Africa, Asia, the Mediterranean, Southern Europe, South and Central America. It is not an uncommon disease in Pakistan. Two hundred and thirty nine cases of VL due to L.D. Infanturn were reported between 1985-95, of these 52% were children below the age of 2 years and 86% were below the age of 5 years. This represented an increase of 10 fold in infantile VL cases over the 10 years period from 0.2 to 2 per 100,000 population and male cases out numbered female cases by three folds.
VL has been known to exist in the Himalayas in Pakistan for over three decades. However recently sporadic cases are beginning to appear in the North West Frontier Province (NWFP), Punjab and Azad Kashmir. All of these areas are mountainous and contain large farming communities[1-3].

The disease is characterized by low grade fever, pallor, hepatosplenomegaly, abdominal distention, hematological abnormalities, weight loss, bleeding diathesis and bronchopneumonia[3,5-7].

In Pakistan, children of younger age group are more commonly affected and lymphadenopathy is a less common feature[3,6]. Diagnosis of VL needs a high index of suspicion and is suspected on the basis of clinical features, area to which the patient belongs and on laboratory findings. It is confirmed by detecting the parasite in the bone marrow aspirate and splenic puncture. Current methods of diagnosis include formal gel test, direct agglutination test, indirect haemagglutination test and ELISA techniques[3,7-9]. Many diseases should be kept in mind while considering possibility of VL, including malaria thalassemia, disseminated TB, juvenile CML and lymphoma[4].

Pentavalent antimonial compounds; sodium stibogluconate (pentostam) and meglumine antimoniate (glucantime) in the dose of 20 mg/kg per day J/M once daily for 20 to 40 days is still the treatment of first choice and is curative in majority of the cases[3,4-7]. In resistant cases, second line drugs like Amphotericin B, Pentamidine, Paromomycin, Imidazoles and Triazoles have been effective in curing the disease[4,5].

VL should be suspected in all those cases that present with prolonged fever, gradual pallor and marked hepatosplenomegaly especially if they belong to the
Northern Areas, AK and NWFP. Further epidemiological studies are required for VL in Sindh province.

References

1.Hassan K, Ikram\' N, Bukhari KR et al. Visceral leishumaniasis. A study of 38 cases on the basis of geographical distribution, J. Pak. Med. Assoc.,1995;45:125-27.

2.Rab MA, Evans DA, Leishmania Infantum in the Himalayas. Trans. R. Soc. Trop. Med. Hyg., 1995;89:27-32.

3.Rahim F, Rehman F, Ahmed S. et al. Visceral leishmaniasis in district Dir, NWFP. J. Pak. Med. Assoc., 1998:48:161-62.

4. David J. Wvler, Davidson H. Hammer. Leishmaniasis. Nelson Textbook of Pediatrics, 1996;972-74.

5.Hassan M, Baat DB, Hassan K. A new breakthrough in treatment of visceral leishmaniasis in children. J. Pak. Med. Assoc., 1995;45:155 57,

6.Rathore MH, Bukhsh D, Hassan M. Visceral leishmaniasis in Pakistani children. South Mcd. J., 1996;89:491-93.

7.Singh K, Singh R, Purija SC, et al. Clinical and laboratory study of kala azar in children in Nepal. J. Trop. Paediatr., 1999:45:95-97.

8.Al-Masurn MA, Evans DA, Minter DM, et al. Visceral leishmaniasis in Bangladesh: the value of direct agglutination test as a diagnostic tool. Trans. R. Soc. Trop. Mcd. Hyg.. 1995:89:185-86.

9.Rab MA, Rahim F, Evans DA. Detection of anti leishmania antibodies in blood collected on the filter paper by direct agglutination test. Trans. R. Soc. Trop. Med. Hyg., 1997;91:713-15.