

VISCERAL LEISHMANIASIS (KALA AZAR) IN KARACHI

Pages with reference to book, From 244 To 245

Mohibur Rahman, S.M. Rab, Khawar Abbas Kazmi, Asim Ahmed (Department of Medicine, Jinnah Postgraduate Medical Centre, Karachi.)

Visceral leishmaniasis (VL) or Kala-azar (KA) is a communicable disease caused by *Leishmania donovani* named after the discoverers, Leishman and Donovan both of whom reported on the organism simultaneously, Leishman from London in May, 1903 and Donovan in July, 1903¹. Except for Australia, it is endemic in many places in China, Africa, Southern Europe, South America, Russia and India where it is endemic in Assam, Bengal, Bihar, Madras and the eastern parts of the Uttar Pradesh and far as Lucknow². In Mediterranean areas, China and Brazil, the dog is considered to be the reservoir of infection for man. Canine leishmaniasis does not exist in India where human kala-azar is endemic, hence in India man is the main or only source of infection. In Sudan and East Africa, it is primarily a rodent infection and in Russia, the jackals are the reservoir of infection³. The incubation period generally varies from 3-6 months but the longest incubation period of 10 years and 24 years is reported by Wright and Noor respectively. ⁴ Although the characteristics of the disease are similar throughout the world, certain local peculiarities in its behaviour justify the classification of VL into African (KA), Mediterranean or infective (KA) and Indian (KA). The onset of the disease may be insidious or abrupt. Fever typically nocturnal and occasionally double quotidian is almost universal and is accompanied by tachycardia without signs of toxemia. Daily fever progresses to recurrent febrile waves. Non-tender splenomegaly is invariably present while hepa-tomegaly is not a constant feature. Pancytopenia is characteristic, hypoalbuminaemia and hyperammaglobulinaemia are often present. Leishmaniasis can occur at any age but mostly it is a disease of childhood and adolescence. Once infection occurs, lifelong immunity develops. ⁶ In the present territories of Pakistan there was no record of VL until 1960 when Ahmed et al. ⁷ and Burney et al⁸. reported 30 cases of VL from Northern areas of Pakistan (Baltistan) who also identified the vector sandfly of the genus *Phlebotomus* in the same areas and a case with long incubation period of 24 years was also reported from Multan by Noor et al. ⁴ Although sporadic cases of cutaneous leishmaniasis (unpublished) are found in this area, no case of VL has been reported so far in Karachi, the present two cases may well be the first to be reported from this part of the country.

CASE REPORT

Case 1:

A 42 year old housewife resident of Korangi (Karachi) was referred from NICVD on December 30, 1986 to our unit for evaluation of severe anaemia and low grade fever with a worked up diagnosis of RHD-MS, MR,AR, CCF functional class II. The fever was associated with weakness, easy fatigability, pain and aches all over the body. She had no past history of any illness or travelling abroad. On physical examination patient was wasted, chronically ill with severe anaemia and koilonychia. Her pulse was 90/min and temperature 100°F. Spleen was enlarged 10 cm below left costal margin and liver by 5 cm below right costal margin. She had mid diastolic and pansystolic murmurs at apical area and early diastolic murmur at aortic area. There were no other abnormalities detected. Her ESR was 20 mm in 1st hour, Hb 7.5 gm%, TLC 3350/cmm, polys 76% and lymphocytes 24%. The urine and stool examinations were normal. Serum electrolytes, blood sugar, blood urea nitrogen, LFT's, serum iron and total iron binding capacity were all normal. Absolute values were, Hb 8.1 gm%, MCV 73 cmm, MCH 23 per gram and MCHC 32%. Ultrasound of abdomen showed

hepatosplenomegaly with no other abnormality. Splenic puncture smear revealed dumps of Leishmania donovan bodies. Formal gel test was positive indicative of increase in serum globulins. Patient was treated with pentavalent antimony to which she responded.

Case 2:

A 41 year old housewife born in India (Patna) in 1946, from where she migrated to East Pakistan in 1961 and then to West Pakistan in 1971. She had since been residing at Karachi. She was referred to our unit from Gynae ward in September, 1986 with the complaints of low grade fever, weakness and mild abdominal pain of 4 months duration with no significant history of any illness in the past. On physical examination, she was found to be severely anaemic and wasted with pulse 94/min and temperature 99°F, spleen was enlarged upto umbilicus below left costal margin and liver was enlarged by 4 cm below right costal margin. Remainder of physical examination was normal. Laboratory data revealed TLC of 1900/cmm with 58% neutrophils, 39% lymphocytes, 1% monocytes, 2% eosinophils and Hb. 7.4 gm%. Peripheral blood smear was negative for malarial parasite. Stool and urine analysis was normal. LFT's were normal except for slight rise in enzymes. Bone marrow aspiration showed hypercellularity with myeloid hyperplasia. Formal gel test was positive. Splenic puncture smear was positive for LD bodies. A diagnosis of Kala-azar was made and patient was started on injections of stibitidine to which she responded very well with shrinkage of spleen and improvement of anaemia.

DISCUSSION

In this study, case 2 either contracted infection during her stay in India or Bangladesh in which case the incubation period was probably at least 16 years or else she has got this illness during her stay in Karachi like case 1, who never left Karachi and thus source (reservoir) of infection and method of transmission has yet to be identified in this area. As KA is endemic and common in Bangladesh, according to unofficial reports, large number of people have migrated to Pakistan in recent past and have settled in Karachi, they might be the source (reservoir) of infection. In this city (Karachi) several persons, presented to dermatology department (not published) who affirmed that they have never been out of Karachi and they developed oriental sore (cutaneous leishmaniasis) proved by microscopy and culture. It is possible that a new vector of a sandfly not yet identified is existing in this area as in Baluchistan reported by Burney et al.⁸ Every case of unexplained splenomegaly with anaemia, leukopenia and pyrexia should be investigated for Kala-azar even in patients who have not travelled in endemic areas and a large-scale study maybe designed to identify the vector and reservoir of infection in this area.

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