A SURVEY OF 24 CASES OF KALA-AZAR IN CENTRAL PARTS OF IRAN.

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ABSTRACT

Clinical and laboratory findings of 24 patients with Kala-azar are presented here from our survey. Kala-azar is much more prevalent than the number of diagnosed cases might suggest and most of them die because of the lack of medical care available locally. Malnutrition, poor hygiene and lack of education are important factors in the high mortality rate from this infection.

INTRODUCTION-Kala-azar is a patentially fatal infection and commonly manifests itself in fever, pallor, weakness, abdominal pain, abdominal enlargement due to hepatosplenomegaly and weight loss. Its protozoan parasite was discovered by Leishman and Donovan in 1903. It is transmitted by the sandflies. Other modes of transmission reported are by exchange transfusion and by contagion (1,2). The incubation period ranges from 10 days to one year, but is usually about three months.

Geographically, the distribution of Kala-azar is wide, but local endemicity is usually sharply dalineated. The disease is apt to occur in the Mediterranean arcas, in Mesoptamia, West Africa, Southern Russia, India, North China and Brazil. In Middle East countries it exists as an endemic disease (3,4). The first case of Kala-azar was reported in Iran by Pooya in 1949. He found it in a 20 years old man from Shahsavar (5,6). The first postmortem examination of a case of Kala-azar in Iran was reported by Armine and his colleagues (7). The Kala-azar patients are reported almost from all areas of Iran with the exception of Baluchestan province (8,9,10). Here we will present the results of a survey of 24 patients from the central part of Iran (Isfahan) during a six years period.

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SURVEY OF THE 24 PATIENTS.

Our patients ranged in age from 2.5 to 25 years, 18 of them were male and the remainder were female. Most came in the summer-time from Semirom Olia, Shahrekord and Kohrang areas in the south and west part of Isfahan province. In 50% of the cases the family members had seen other patients like our patients, who had died, because of being too far from the local doctor.

The diagnosis in all cases was made by demonstrtion of the Leishman-Donovan bodies in the bone marrow aspiration. The most important clinical signs and symptoms of these patients during admission are presented in Table 1, and the physical findings in Table 2. The results of hematologic findings are summerized in Table 3.

Visceral Leishmaniasis is a childhood disease, seen most commonly in two to five year old children. We had a sex ratio of eight males to one female, but many authors believe that there is no sex difference and some others have related the geater number of males to the prevalence of this sex in the out-patients department (11, 12, 13). The youngest patient reported until now has been a four month old infant (14, 15,).

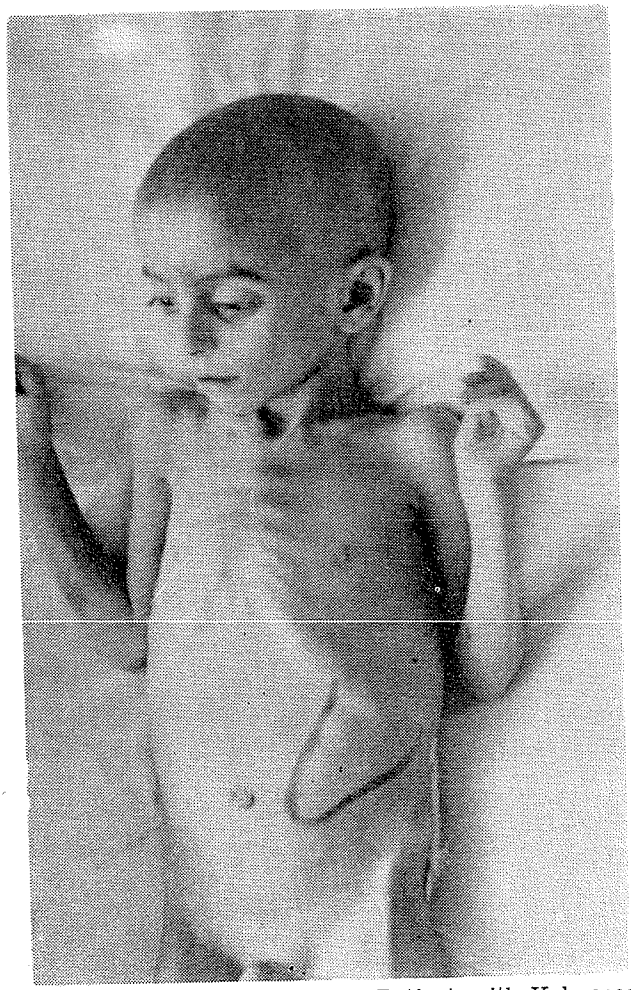
Symptoms and Signs.

The first symptom, in most cases, began one to four months prior to admission to the hospital. During hospitalization, fever, ranging from 38⁰. to 40⁰ C, was the constant finding in every case and subsided two to three days after the administration of antimony. 25% of the cases had chills. We saw a patient with a typical tertian chill, Dark skin pigmentation and weight lose (20 to 30%) were present in 100% of the cases. Beause most of the patients were tent dweller, and were living directly under the sun light, dark skin and pigmentation were not purely from their illnesses. We had a five year old boye who weighed only 12Kg. Splenomegaly was evident in all cases. In half of the cases, the lower border of the spleen was palpable in the left illiac fossa and in 20% of the cases the right border passed a few centimeters beyond the midline. Macroscopic and microscopic bleeding were demonstrated in 75% and 100% of the cases respectively. Anemia was the most common laboratory finding and evidence of hemolysis was present in 25% of the cases. We had two fatal cases with hemorrhagic bronchopneumonia. The autopsy findings from one of our — patients revealed, congestion of the spleen and reticul ar cell proliferation, many of these containing several Leishman bodies. Fatty degeneration was evident in the enlarged and congested liver. Kupffer's cells contained Leishman bodies and hemosiderine (Fig 3). Some degree of periportal fibrosis and inflamatory reaction were noted. The pulmonary alveoles were full of pus and edema. Microscopic examination of the heart showed interstitial myocarditis, the kidneys were only congested and no other remarkable manifestations were seen.

Most of our patients were from families with poor socioeconomic backbrounds, poor sanitation and malnutrition, all of which could be — predisposing factors.

Therapy.

All the patients were treated with glucantime-antimony-N- methyl — glucamine for 14 days. After beginning the therapy, in most instances, the fever subsided within a few days and usually after 14 days the spleen reduced in size and was no longer palpable. Four patients failed to respond in the first 14 days of the treament and we had to withdraw the drug for 15 days. After the second course of the same treatment we were successful and the patients responded to the therapy. During the therapy we were aware of myocardial toxicity of antimony. Stokes-Adams attacks, arrhythmias and even myocardial



F.G 1: Enlarged Splees of the Patient with Kala-azar.

infarction have been reported with the use of this drug (16), but in our series we haven't had the same complications, We had a cure rate of 92%. The two patients who died were in the end stage of the disease so the treatment commenced very late without any sucessful results.

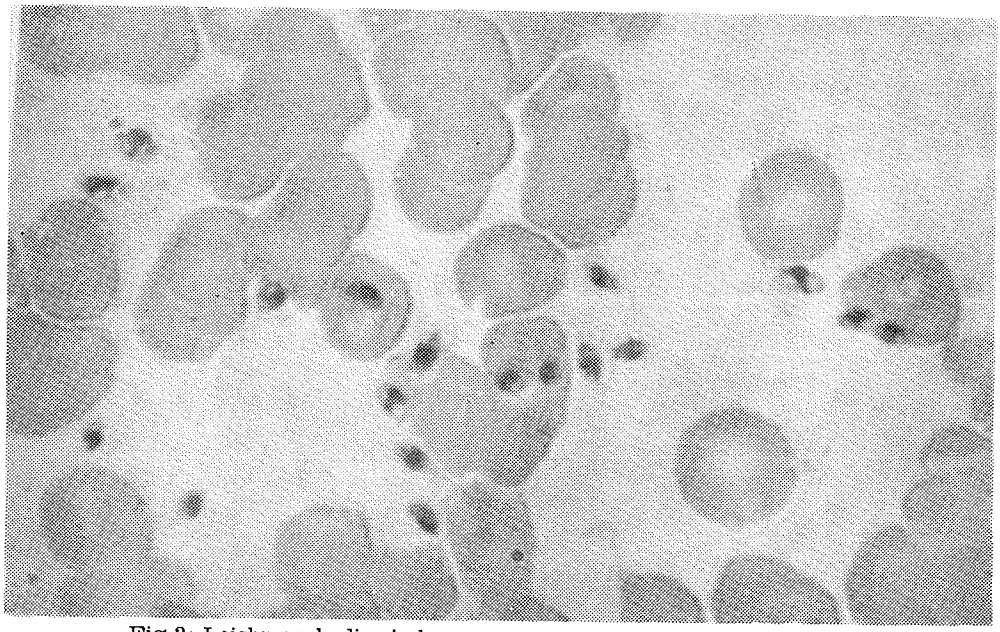


Fig 2: Leishman bodies in bone marrow of the atient with Kala-azar.

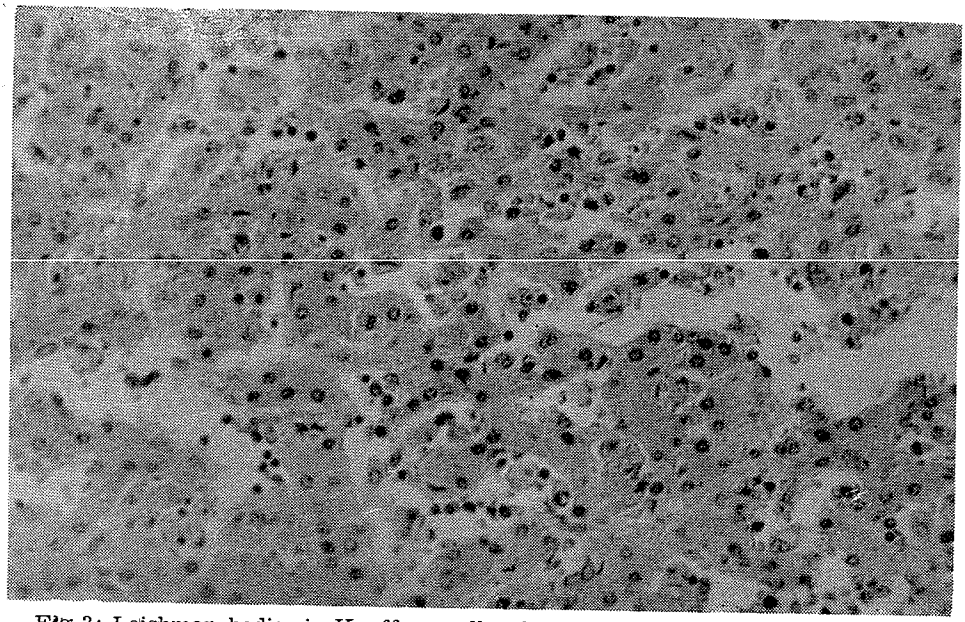


Fig 3: Leishman bodies in Kupffer, scells of the liver of Patient with Kala-azar

TABLE 1. The most important presenting symptoms of 24 patients with Kala-azar.

SYMPTOMS.	No. of CASES.	%
Fever	24	100
Chill	6	25
Pallor	21	85
Anorexia	20	80
Weakness	20	80
Sweating	15	60
Abdominal pain	16	62
Loss of weight	24	100

TABLE 2. Positive physical findings in 24 cases of Kala-azar.

PHYSICAL FINDINGS.	No. of CASES.	%
Hepatosplenomegaly	24	100
Dark skin Pigmentation	24	100
Jaundice	6	25
Petechia, echymosis and bleeding	19	75
Positive Guaiac's test	24	100
Micropolyadenopathy	19	78

TABLE 3. Hematological findings of 24 patients with Kala-azar.

		No. of CASES.	%
*	Anemia (Hb less than 10g./100ml).	24	100
**	Leukopenia (less than 5,200/ml)	24	100
***	Thrombocytopenia (less than 136,000)	24	100
	Hyperbillirubinemia	6	25
****	Prolonged Prothrombin time.	12	50

* The most anemic patient had erythrocyte number of 1,440,000 per cub mm.

** The most leukopenic patient had leukocyte number 1,200 per cub mm.

*** The lowest rate thrombocyte was 34,000, and the greatest number was 136,000.

**** Tree patients (12.5%) had a prothrombin time more than 30 seconds.

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