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Original article

Jaundice in pediatric visceral leishmaniasis (kala-azar) patients

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Abstract

Objective: Visceral leishmaniasis (Kala-azar) is endemic in many countries including Bangladesh. Clinical presentation of visceral leishmaniasis in children and adult may vary and at time may simulate many tropical and hepatobiliary diseases. Jaundice and ascites are not common in kala-azar patients. **Methods**: During the period of January 2005 to December 2006, all the records of the confirmed kala-azar patients presented with jaundice were included in this study. Kala-azar was confirmed by serology test ICT (Immuno Chromatography) and Bone Marrow study. **Results**: Total 12 kala-azar patients were encountered during this period. Among these twelve cases, presenting features were jaundice (7), splenomegaly (12), hepatomegaly (11) and ascites (4). Initial clinical diagnosis of chronic liver disease (CLD) was made in (5), Congenital hemolytic anaemia in (1) and kala-azar in rest of the patients (6). Common leucopenia and relative lymphocytosis was not observed in any patients. **Conclusion**: Kala-azar may present with various clinical manifestation in children and adult. Jaundice can be considered to be a common manifestation particularly in pediatric kala-azar patients. Otherwise, it may mislead to another diagnosis if it is taken as a rare feature in kala-azar.

Keywords: Jaundice; Pediatric (kala-azar); Patients

INTRODUCTION

Leishmaniasis has a vast geographic distribution. Visceral Leishmaniasis (Kala-azar) is now endemic in 88 countries with a total 350 million people at risk[1,2]. World wide there are estimated to be approximately 500 000 cases of visceral leishmaniasis per year[3]. 90% of all kala-azar cases occur in Bangladesh, Brazil, India, Nepal and Sudan[4]. In Bangladesh the number of cases in northern district is alarmingly high[5,6]. Sporadic cases are found in other parts also. The disease is characterized by chronic fever, hepatosplenomegaly, emaciation and anaemia[7,8]. Jaundice and Ascites are rare presenting features of kala-azar[1]. The experiences in this short series are analyzed about the unusual presentation of jaundice in kala-azar patients.

MATERIALS AND METHODS

All the records of the pediatric kala-azar patients presenting with jaundice were included in this series. Age range was between 1-12 years. The period of study was from January 2005 to December 2006. There age and sex distribution was done. Clinical presentations and investigation reports were analyzed. The confirm diagnosis was made by serology test ICT (Immunochromatography) and Bone marrow study

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RESULTS

Total 12 kala-azar Paediatrics patients were admitted during this period. Among them seven patients (60%) including five girls and two boys were with jaundice. They were between the ages of four to eleven years. In our observation, the presenting symptoms of fever, yellow discoloration of eye and urine, loss of weight, pain in the abdomen was found in 11 (92%), seven (60%), four (33%), three (25%) respectively. Regarding the clinical signs, anaemia of different degree and splenomegaly was observed in 12 (100%), hepatomegaly in 11 (92%), Jaundice in seven (60%), ascites in four (33%) cases. Two patients had ascites among seven jaundiced patients. Out of seven jaundiced patients four (57%) had hemoglobin much below normal level. ESR was high in the entire patient except one who's ESR was not done. Leucopenia and relative lymphocytosis was not observed in any patients. Raised serum bilirubin was found in all the patients and SGPT was high in six (86%) cases. Initial clinical diagnosis of chronic liver disease (CLD) was made in five (42%), congenital hemolytic anaemia in one (8%) and kala-azar in rest of the patients six (50%) out of 12.

The details of the clinical profile (Table 1) and investigative findings (Table 2) were shown among the jaundiced kala-azar patients. All the cases were treated with appropriate dose and course of Sodium stibogluconate with good recovery.

Table 1 Clinical profile in the Jaundiced Kala-azar patients.

Parameters	Case1	Case2	Case3	Case4	Case5	Case6	Case 7
Age	4Yrs	8Yrs	10Yrs	9Yrs	5Yrs	8Yrs	11 yrs
Sex	F	M	F	F	F	M	F
Symptoms							
Pain in the abdomen	A	A	A	A	A	+	A
Fever	+	+	+	+	+	+	+
Bleeding	A	A	A	A	A	A	A
Loose motion	A	A	A	A	A	A	A
Cough	A	A	A	+	A	A	A
Anorexia	A	A	A	A	A	A	+
Loss of weight	A	A	A	+	+	A	+
Yellow colour of eye or urine	+	+	+	+	+	+	+
Signs							
Anaemia	+	+	+	+	+	+	+
Jaundice	+	+	+	+	+	+	+
Oedema	+	A	A	A	A	A	A
Hepatomegaly	+	+	+	+	+	+	+
Splenomegaly	+	+	+	+	+	+	+
Ascites	+	A	A	A	A	A	+

A: Absent; F: Female; M: Male; A: Absent & present.

Table 2 Investigative findings relative to jaundice in Kala-azar patients.

Parameters	Case1	Case2	Case3	Case4	Case5	Case6	Case 7
Serum Bilirubin (mg).	9.2	2.3	3	2.4	2.8	1.5	4.2
SGPT	102	240	152	81	48	40	58
HBsAg	-	-	-	-	-	-	-
TLC	8 800	7 550	13 300	7 800	10 850	6 500	10 100
Neutrophil	67	84	51	57	54	54	58
Lymphocyte	28	12	45	43	44	43	40

SGPT: Serum Glutamic Pyruvate Transaminase, HBsAg(-): Hepatitis B Surface Antigen Negative, TLC: Total Leucocyte count/cu mmFigure within the parenthesis indicate percentage.

DISCUSSION

In our observation, in this series female was a bit more affected than the male which corresponds with the study by Mamoon ABA & et al[9]. This might be because females were more exposed as they remain in the house most of the time day and night in our context. Four to eleven years of age was the most vulnerable age in our report. It had been seen in India, The peak age of the disease was five to nine years[10]. This was almost similar to our observations. The important clinical features are generally similar in different geographic regions like chronic fever, hepatosplenomegaly, Anaemia, emaciation[1]. Jaundice of different degree was observed in significant number of patients in this series in addition to the usual clinical presentations. Accordingly initial clinical diagnosis of chronic liver disease (CLD) was made in significant number of case which is misleading. Raised serum Bilirubin was observed among all the cases and SGPT in six cases. These events might be due to hepatitis caused directly by protozoa (LD bodies) itself or indirectly by the effect related to the immunological response of the parasites. In this area, kala-azar is a disease which has jaundice including other features rather than the disease in endemic form in the northern part of Bangladesh. Jaundice might be related in pediatric kala-azar patients because of the area of distribution and subtypes of Leishmania Donovani (LD) bodies responsible for the disease. Leucopenia with relative lymphocytosis was marked in kala-azar[11]. This was not similar to our experience. None of the patients in our series showed these investigational findings. This chronic infection might not have any influence in the usual inflammatory response of disease.

In presence of jaundice and absence of leucopenia and relative lymphocytosis might be misleading events for the diagnosis of the kala-azar.

So, In conclusion, it is to be mentioned that the jaundice with other consistent clinical features should not always necessarily be considered as other diagnosis. Whether Jaundice is to be considered further as a unusual presentation or as a usual presenting features of kala-azar in some parts of the world needs to be vividly studied.

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