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Study of Clinical Manifestations of Visceral Leishmaniasis in Children of Basra Province

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Abstract

Leishmaniasis in some nations, including Iraq, is considered as a significant public health issue due to its significant influence on morbidity, which places a significant cost on national health. It is more prevalent in the centre, south, and west of the country. The present study describe 85 child patients (46 males and 39 females) with visceral leishmaniasis in Basra province/Southern Iraq 81% less than two years old. The predominant clinical features in these cases were fever and anaemia 100%, hepatosplenomegaly 70.5%, pale 65% and cough 45.8%. weight loss, abdominal distention, diarrhea and sweating were have fewer rates.

Keywords
Visceral leishmaniasis fever, HSM

Leishmania species can cause a series of parasitic diseases known as visceral leishmaniasis (VL), often known as kala azar, which is most common in tropical and subtropical regions. With a preference for young children, this disease is a persistent parasite infection that affects about 400000 people yearly (Aronson et al., 2020).

The leishmaniases found in all of continents unless of Oceania, which are among the most gravely neglected tropical illnesses. representing the infectious diseases that are most prevalent. The two morphological life cycle stages of the leishmania parasite are amastigotes and promastigotes in mammalian and sandfly hosts, respectively. The obligate intracellular parasite protozoa of the genus Leishmania are the cause of the vector-borne zoonotic disease known as leishmaniasis. When people, flies, and the hosts of the reservoir live in the same habitat, the disease spreads to the human population. The bite of an infected sand fly vector transmits Leishmania infection to people and other mammals. (Abbate et al., 2019).

The parasite is carried throughout the body by the lymphatic system of human macrophages, where it lives in their cells. The parasite can cause serious illness and invades several internal viscera. VL is distinguished by irregular fever attacks, significant weight loss, spleen and liver enlargement, and anemia (Dayakar et al., 2019). Pneumonia and abdominal distention was reported. The first symptoms of the disease invading the internal organ are recurring low-grade fever. This fever persists throughout the disease being with twice daily peaks ((Solimando et al., 2022).

The visceral leihmaniasis begins with fever and malaise and is followed by wasting, enlarge of spleen and liver (hepatosplenomegaly H.S. M) and finally death in some years. In some cases the disease is more acute with chills and high fever and death may occur in six to twelve

months (Pearson & de Queiroz Sousa, 1996).
The clinical patterns of this disease vary in different parts of the world, the lymph-adenopathy is common in African leishmaniasis, but rare in the Indian type ((Jha & Ramesh, 2016).
In Sudan and Brazil the VL characterized by hepatosplenomegaly, diarrhea, cough and fever, malaise and decrease weight gain were common (Pedrosa, 2017).
This study was, undertaken to evaluate the clinical infestation of visceral leishmaniasis in the child of Basra province.

Methods

It is include 85 child aged from six months to 10 years 45 male and 40 female patients admitted to the Basra hospital and diagnosed as having visceral leishmaniasis. The diagnosis was confirmed in all hospitalized children patients by identifying Leishmania parasites in bone marrow smears or by positive serological test. Data recorded age, fever, pale, weight loss, vomiting, diarrhea, hepatosplenomegaly (H.S.M), loss appetite, jaundice. Anaemia, dyspnea, sweating and pneumonia.

Results

During this study, 85 patients (46 (54.1%) males and 39 (45.8%) females) which confirmed cases of visceral leishmaniasis were admitted to the Basra hospitals to investigated. Their age range from 6 months to 10 years, the majority 81% were less than two years old.
All children presented with a long history of fever (100%), usually foe more than one week. Other symptoms included anaemia (100%), the rate of pale, H.S.M. and cough were almost 60%. Vomiting, loss appetite, loss of weight, abdominal distention, jaundice, diarrhea and dyspnea, were less common.
The hepatosplenomegaly were in 60 (70.5%), pale was the fourth majority symptoms which found in 56 child 65.8%. Jaundice, diarrhea and weight loss are less common features. One case of pneumonia were recorded with the infection by this disease.
Maximum degree of temperature recorded was 41C° for two children with an overall mean equal to 39C° degree.

Table (1): Clinical manifestations of hospitalized children with VL in Basra Province

Clinical features	No.	%
Fever	85	100
Anaemia	85	100
H.S.M.	60	70.5
Pale	56	65.8
Cough	39	45.8
vomiting	31	36.4
Abdominal distance	6	7.05
Diarrhea	4	4.7
Jaundice	5	5.8
Weight loss	3	3.5
sweating	6	7.05
Dyspnea	8	9.4

Discussion

Visceral leishmaniasis in Iraq was affected in children. The present study shows 53 (62.3%) of visceral leishmaniasis were from age less than 2 years suggesting that young children are at higher risk. This results in agreement with other studies (Rahi et al., 2013; Nori, andAl-Jeboori, 1979). In Saudi Arabia and Yemen (Al-Orainey, et al. 1994 and Rageh, 1990). In contrast, in Africa and India the disease affects older children and adults (Zijlstra and el-Hassan, 2001), while Sampaio et al., (2010) found the prevalence of VL in Brazil was 3.1 % for children less than 15 years, but in the Horn Africa 65% of VL cases were found in children less than 15 years.
The current results showed that the prevalence among male 54.1% higher than female 45.8%. Rahi et al., (2013) was found the rate more in males (93, 54.1%) than females (79, 45.9%), (48 %) of them patients were resident of central parts of Iraq. The male: female rate of disease was 3:1 in central Iraq. Women accounted for a significantly lower proportion of the reported cases than men (41 vs 59%, $P < 0.0001$) infected with visceral leishmaniasis in India population (Jervis et al., 2017).
Diagnosis of visceral leishmaniasis is depended on clinical symptoms and confirmed by serological tests. The predominant features seen among the patients were fever, anaemia, pale H.S.M, and cough, Similar results were reported from Sudan, India, Saudi Arbia, Brazil and Nipal (Al-Orainey, et al. 1994, WHO, 1996). Also in Sudan, Chappuis et al., (2007) reported the majority of the patients (67/81) presented

with a complaint of fever, The most frequent clinical features were cough, weight loss, pallor, hepatosplenomegaly and pancytopenia.

The present results shown lower rates of abdominal distention, weight loss, jaundice, odema and dyspnea. Lymphadenopathy is commonly seen in African type of the disease (Tarekegn & Tamene, 2021).

Conclusions: The clinical manifestations including fever, cough, pale, vomiting and hepatosplenomegaly were the typical features of visceral leishmaniasis in current study.

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