

Complications of Kalazar among Children in Hilla-city

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Abstract

Objective: This study aimed to detect the types of complications of children suffering from kalazar; also to identify the reason of these complications.

Methodology: A descriptive study carried out from Feb15th to June 15th of the academic year 2017. The sample consisted (109) children from general maternal and children hospital in Hilla/Babylon. The study designed and data was collected using structural questionnaire which was prepared by consulting panel research expertise, also by assessment approach and interview was done with parents of children. The collected data were analyzed through descriptive statistics by frequency and percentage.

Results: The results of the present study indicated that most of the children age were (13-18) yrs.(40.4%); male gender more involved (67%) and (27%) were from Meseib city. The education level of parents were within secondary school, mothers (52%) fathers (43%). The income of affected children families involved in the study were (51%) poor, which isn't enough to maintain healthy well being status and medical requirements. Complications revealed that children suffers from bleeding tendency (13.5%) severe anemia were (20%) hepato splenomegaly were (14.0%) , finally death occurs because of septicemia (37%).

Conclusion: Complications occurs because of poor and inappropriate medical diagnosis, also infective medical treatment during hospitalization and lack of medical follow up to children suffering from kalazar by the health team after hospital discharge.

Keywords: *Complications, Kalazar, Children, Hilla-city*

Introduction

Kalazar is a parasitic disease caused by the visceral leishmaniasis. This parasite lives in infected dogs transfer to sand flies to human, then humans can also transmit the parasite between each other through a blood transfusion or shared needles. Different species of the parasite cause each form, cutaneous leishmaniasis affects the skin and usually not serious; visceral leishmaniasis damage the interior organs and can be life-threatening; mucocutaneous leishmaniasis can lead to partial or complete destruction of the mucous membranes found in the nose, throat, and mouth¹. The parasite common in tropical and subtropical environments, affected region are often remote and unstable, with limited resources for treating this disease. According to the (WHO), environmental and climate factors heavily influences the

spread of disease; 350 million people all over the world are considered at risk, and 2 million of new cases occur yearly. (90%) of cases occur in Mediterranean; Central West Asia; Middle East; North and East Africa; South and Latin America². In Iraq kalazar disease increased from 5% of people with visceral leishmaniasis in (1999-2000) to 9% in (2016-2017)³. Socioeconomic conditions; poverty is a determining factor for the disease, malnutrition, illiteracy, large migrations caused urbanization emergency situations and changes; infections and people who have weakened immune systems are also at increased risk of this conditions⁴. The incidence rate of kalazar is from (1-14) yrs. of age, the disease occurs from 2-8 months after being bitten by a sand fly; typically lead to fever, malaise, skin ulcer and dark ashen color, shivering, loss of weight, anemia, digestive disorder, dyspnea, edema in the lower limbs,

lymph. adenopathy, jaundice and hepato splenomegaly and some patients progress with heavy bleeding, finally sepsis and renal failure leads to death ⁵. For diagnosis, skin biopsy by scraping one of the ulcers to identify the parasite, also physical and blood exam is required. Treatment include medication that containe antimony (e.g meglumine and sodium stibogluconate). Ulcers on the face that cause disfigurement may require plastic surgery. The potaintial complication include bleeding and weakened immune system which can be life threating and fatal. Death occurs due to complications of the disease and not to the disease itself ⁶.

Methodology

Design: A descriptivestudy was conducted, purposive sample of (109) children were suffering from kalazar in Hilla-city. Aquestionnaire has been used as a tool of date collection, for the period of Feb. 15/2017 to June 15/2017 and consist of socio-demographic data; pts complains from the disease types of complications and causes of death. Data were analyzed using the destricptive statical data analysis which include (frequencies and percentage).

Results

Table 1. Distribution of Socio-Demographic characteristics of research samples

Variables	Groups	Freq.	%
Age	1-2 yrs.	5	4.6
	3-5 =	22	20
	6-12 =	38	3.5
	13-18 =	44	40.4
Gender	Female	36	33
	Male	73	67
Residency	Urban	54	49
	Rural	55	51
Parent Education	Primary	Mother 28 - 26	Father 22 - 20
	Secondary	57 - 52	47 - 43
	College	24 - 22	40 - 37
Economic Status	Enough	25	23
	Just enough	33	30
	Not enough	51	47

Table (1) shows the highest percentage of the sample at age ranged from (13-18 yrs.) and they are accounted (40.4%) male were more affected, they were accounted far (67%). The highest percentage of the sample was represented in urban (49%) and rural were (51%); The percentage of parent education was secondary school level (52%) among the mothers and (43%) among the fathers. Economic status, the highest percentage of the sample was not enough, they were accounted (51%) concerning the families income status.

Table 2. (Part-I)Complains of children during hospitalization

Chiled problem	Freq.	%
Fever	106	15.7
Loss of weight	86	12.8
Anemia	109	16
Diarrhea	77	11.5
Vomiting	67	10
Dyspnea	50	7.5
Bleeding Tendancy	88	13
Hepato-splenomegaly	91	13.5

Note: The child may have more than one problem.

Table (2) shows that bleeding tendancy accounted (13%); anemia (16%); and Hepato-splenomegaly (13.5%).

Table 3. Period of time during child hospitalization

Time	No.	%
1-2 wks	78	71.5
2-3 wks	21	19.3
3-4 wks	10	9.2

Table (3) shows that period of time during child hospitalization is between (1-2 wks.), which count (71.5%).

Table 4 Types of complication

Complications	No.	%
Severe anemia	88	20
Bleeding	59	13.5
Jaundice	71	16
Pneumonia	55	12.5
Nephritis	65	15
Hepato-splenomegaly	62	14
Death	38	9

Note: children suffer from more than one complication.

Table (4) shows that (13.5%) of the sample suffers from bleeding especially epistaxis 4%, haematuria 5%, malarial 3%, ecchymosis (1.5%). Also 20% of cases shows anemia problems, jaundice (16%) .

Finally death is a result of these complications (9%) of the children in the sample died because of lower resistance and immunity and as a result of weak preventive measurement.

Table 5 Prognosis of children during hospitalization

Prognosis	No.	%
Complete recovery	37	34
Weak prognosis	34	31
Child getting worse	38	35

According to table (5), children with kalazar shows that (34%) got well and recovered from the disease completely; (31%) had weak prognosis and slow response to the therapy. (35%) of children in the sample gets bad prognosis and their condition becomes worse due to the complication of the kalazar disease.

Table 6 Cause of death among the children in the research study

Causes	No.	%
Respiratory failure	11	29
Renal failure	13	34
Septicemia	14	37

Table (6) shows the causes of death among the sample, (37%) because of septicemia, (34%) had died because of renal failure and finally (29%) had died because of respiratory failure.

Discussion

This research study had been reported that the highest percentage (40.4%) of the sample was at age group (13-18) yrs. as shown in table (1), this finding was consistent with study[3] done in Iraq, they found the relation of kalazar with this age group, also male

gender shows (67%) more than female (33%) because the increase risk factor of exposure to the infection. Parent education shows that father had secondary school level while mothers counted (43%) this means, they got the education for understanding the nature of kalazar²; in term of providing health maintenance to their children⁷. The highest percentage of the sample residency was presented in rural area(51%); from (Mesaib 27%, Haswa field 24%); while 49% from urban part in Hilla city and Mahaweel region. Concerning the economic status of children families income were (47%) low and not enough that means they couldn't tolerate the cost of medications which were needed for their sick children, besides the requirements of their living status and health issues⁸. Children with kalazar in the study shows a complications because of bleeding tendency (13.5%); while (20%) of the sample suffer from anemia; (14%) from hepatosplenomegaly⁹. Children stay (1-2 wks) mostly (71.5%) of them; this period of time is not enough for better prognosis^{10,11}. Only (34%) of the children got complete recovery while (35%) of them gets worse condition. The main complications are septicemia(16%), Nephritis (15%) and pneumonia (12.5%). These complications lead's the children with kalazar to death. Also respiratory failure (29%); renal failure (34%); and (37%) because of septicemia. Children becomes resistant to treatment due to their weak prevention to disease and poor immunity system¹².

Recommendations:-

1- Encourage more experimental studies and educational programs concerning kalazar disease in terms of planning and implementing high standard of medical and nursing therapy, through organizing scientific efforts by the Iraqi Ministry of Health and the Academic work within the Iraqi Universities for better control of the disease and personal protection in the community.

2- Provide safety methods and environmental management especially in rural area in order to reduce epidemiological problems, also to interrupt the transmission of the disease in the community and decrease the mortality rate.

3- Apply effective network of communication through Broadcasting; Social Media to increase public information concerning kalazar disease in terms of

prevention and early detection of sick children, and to provide and maintain healthy approach of medical treatment and nursing care within the society.

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Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved and all experiments were carried out in accordance with approved guidelines.

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