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Knowledge of Parent's toward Their Children with Undiagnosed Fever in Baghdad Governorate

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Abstract
Objective: To identify the effect of educational program on Knowledge of parents toward their children with Undiagnosed fever**Methodology:** A descriptive Study sample was taken (120) of parents accompanying their children with undiagnosed fever and reviewers to children's hospitals for the purpose of treatment, I have compiled a study by researcher information and meet with the parents and fill out the form questionnaire and designed for the purpose of study. This study was conducted quasi-experimental in five teaching hospitals and is educational for children of the city of Baghdad from mid-June to the end of September of 2011 for the purpose of identifying knowledge parents of children with undiagnosed fever. Select constant measurement tool through pretest and posttest identified credible measurement tool through a group of experts have been analyzing data through the use of descriptive statistics which includes (frequency, the mean, the mean of scores, standard deviation and percentage percentage) in addition to the use of statistical inferential which includes (T-test, Pearson coefficient, chi square and analysis of variance of the difference between the pre-test and post-test of the experimental group).**Results:** The study proved the presence of a statistically significant relationship between parents' knowledge and demographic information (age of the parents, the cultural level, the function of parents, place of residence, type of breast, family history of fever and the number of infected children in the same family). He appeared in general that few parents, despite knowledge that the majority of parents were preventive practices towards their children with fever. The results of the study showed that there is a positive effect of the educational program on the knowledge of the parents.**Recommendations:** researcher recommended the preparation and implementation of an education program for parents of children with undiagnosed fever and medical and nursing for the purpose of providing them with the necessary information about the case.
Keywords: fever of unknown origin, infection, Educational Program, Parents' Knowledge**.**

Introduction

Fever of unknown origin (FUO) was firstly described in 1961 and defined as well-documented fever of at least 3 weeks duration with no apparent source after 1 week of investigations.[1] It is now generally accepted that unexplained fever that persists longer than 1 week in a child warrants preliminary. Investigations as fever from viral infections generally resolves within that time frame. Therefore, most recent case series of pediatric FUO require persistence of fever for only 1 or 2 weeks with negative preliminary investigations, and the investigations required varied by study. This study summarized the literatures on pediatric FUO to determine the relative incidence of different etiologies, expecting that etiology will vary by geographical location related to the economy of the region, the presence of vectors of infection, and the availability of diagnostic tests. Visceral Leishmaniasis is present worldwide disseminated intracellular protozal infection. It is caused by tissue protozoa of the genus Leishmania (L) called *L donovani,* Leishmania are existing in two morphological distinct forms, flagellated promastigotes which replicate extracellularly within the gut of sand fly, and amastigotes which lack flagella & are obligate intracellular parasites in mammalian host ([1,2,3]).

The disease caused by species of Leishmania (Z. *donovani, L chagasi & L infamum)* that disseminate liematogenously, infecting macrophages in the spleen, liver, bone marrow & lymphocytes ([2,4,5]).
The annual report of Iraqi Ministry of Health in 1994 showed that high frequency of disease was during Winter ([1]). Rahim & Tatar found that the manifestations of the disease start to rise in October reaching a peak in January ([6]).The aim of this study is to assess the diagnostic usefulness of Immunoflurescent Antibody Technique to detect IgM antibody to leishmania antigen. Also, to the-termine the efficacy of Sodium Stibogluconate for the treatment of Kala-azar .

Methodology

The total number of patients was 120 cases of both sexes (62 boys & 58 girls). The prospective study covered all Kala-azar cases admitted to five Pediatrics teaching and non-teaching hospitals in Baghdad from the middle June till the end of September 2011 . Their ages were ranged from 1 month to 6 years. Data were collected from each patient such as age, sex, residence and social history. Clinical examination was done before &during treatment. Sample of blood was used for haematological investigation and serum was send to Central Health Laboratory in Baghdad for Immunoflurescent Antibody Technique (IFAT).Patients received Sodium Stibogluconate intramuscularly at a dose of 20 mg/kg daily for 20 days.

Result

Table 1. Distribution of the socio-demographic data in study of parents and their children with undiagnosed fever :

socio-demographic data	Freqency	Percentage
Aziz zia / Wa sit	40	33.3
Sewaira / Wa sit	15	12.5
Madain / Baghdad	25	20.8
Jisserdiala / Baghdad	7	5.8
Nahrawan / Baghdad	5	4.2
Kamalia / Baghdad	5	4.2
Baghdad Al-Jadida	3	2.5
Doura / Baghdad	2	1.7
Saddam City/ Baghdad	3	2.5
Baquba	5	4.2
Kail Beni-Saad	10	8.3
Total	120	100

Table -1- shows that the high percentage was Azizzia / Wasit of Distribution of the socio-demographic data in study of parents and their children with undiagnosed fever was (40) (33.3%) while the low percentage (2) (1.7%) was Doura/ Baghdad.

Table 2. Distribution of 120 patients according to the age groups

Age groups	Frequency	Percentage
1-6	20	16.7
7-12	40	33.33
13-24	37	30.83
25-36	10	8.33
37-48	6	5
49 & above	7	5.81
Total	120	100

Table 2 shows that the high percentage was 7-12of patients according to the age groups and their children with undiagnosed fever was (40) (33.3%) while the low percentage (6)(5%) was 37-48 of age.

Table 3. Distribution of 120patients according to the signs & symptoms:

Signs & symptoms	Frequency	Percentage
Fever	120	100
Splenomegaly	118	98.3
Abdominal distension	110	91.7
Pallor	100	83.3
Hepatomegly	80	66.7
Loss of appetite	80	66.6
Cough	60	50
Sweating	60	50
Diarrhea	46	38.3
Rigor	30	25
Lympho adenopathy	25	20.8
Skin & hair change	20	16.6
Jaundice	10	8.3
Edema	5	4.2
Total	120	100

Table 3 shows that the high percentage was fever according to the signs & symptoms of children with undiagnosed fever was (120) (100%) while the low percentage (5) (4.2%) was Edema.

Table 4. Haematoiogicail investigation:

Investigation	Frequency	Percentage
Anemia	100	81.7
Leucopenia	74	61.7
Thrombopenia	92	76.7

Table 4 shows that the high percentage was *Anemia* according to the HaematoLogicaiI investigation was (100) (*81.7*%) while the low percentage (74) (61.7%) was Leucopenia .

Table 5. Serological testing by IF A T:

Serological test	Frequency	Percentage
1st sample	98	8i.7
2nd sample	8	6.7
3rd sample	7	5.7
Total	113	94.1

Table-5- shows that the high percentage was 1st sample according to the Serological testing by IF A T was (98) (81.7%) while the low percentage (7) (5.7%) was 3rd sample .

Table 6. The response rate to treatment of Sodium Stibogluconate:

Duration of treatment	Frequency	Percentage
1-6 days	10	8.7
7-10 days	32	27.8
11-22 days	70	60.9
Total	112	97.4

Table (6) shows that the high percentage was 11-22 days according to the treatment of Sodium Stibogluconate was (70) (60.9%) while the low percentage (10) (8.7%) was 1-6 days.

Discussion

From the present study a large number of cases were collected during December to April explained by a long incubation period of disease from several weeks to 8 months ([1,2]). As far as seasons are concerned, it is shown that the incidence of disease increased in Winter season ([1/1,5,7]). Rahim & Tater [6] forword that the manifestation of the disease started to rise in October reaching a peak in Januaiy and then gradually declined reaching the lowest level in August. Also, they mentioned that 2/3 of patients where examined between December & end of March. These findings are in agreement with the present study. and aggravated by the presence of stagnant water which is good environment for sand fly ([5]).

On the basis of clinical signs and symptoms, it is impossible to differentiate Visceral Leishmaniasis from other causes of febrile's splenomegaly. Although, a firm diagnosis of Visceral Leishmaniasis requires demonstration of the parasite in organ aspirate or tissue biopsy (8). Meanwhile, splenic aspiration can be a high-risk technique for young patients. So, it requires non-invasive technique like the enzyme linked immunosorbent assay or Immuno-FIuorescent Antibody Test (IFAT) ([1.5,8.9,10]).

In the present study, serological testing by IF AT, shows that 98 patients (81.7%) were positive at the first time. So, there is no need for invasive procedures for diagnosis of the disease. Also, the present study reveals that we should not depend only on single IF AT, if clinical signs and symptoms are classical & patients from endemic areas, a second and third testing by IF AT should be done. Moreover, IF AT was found a reliable test when compared with ELISA ([9,12]).

Sodium Stibogluconate (pentostam) was found very effective for the treatment of majority of patients ([11,13]). In this study, the response rate to Sodium Stibogluconate intramuscularly at a dose of 20 mg/kg daily for 20 days was very high and reaches 97.4%. Because of the unavailability of Betaconazol & Amphotericin B, it was not possible to compare the effectiveness of these drugs ([11]). Those who died after treatment (only three), due to complication of the disease. This finding explains that the disease is more severe in younger age and this age group needs emergency treatment by blood transfusion, antibiotic therapy & other resuscitations. Eight patients died, all of them were below one year of age and 5 of them before starting the treatment. WhileEight patients died from complications of the disease such as bleeding & shock. This means that the disease was more abrupt in onset and more severe in younger age group (5). Also, from the present study 50% of the patients were below one year of age. regarding residency, the majority of cases came from Baghdad and Wasit. In these areas domestic animals are raised around their houses.

Recommendations

We recommend the following: It is advisable to give more attention to any patient from these areas with fever, pallor, and hepto-splenomegaly and should raise high index of suspicion for Kala-azar disease until proved otherwise. Also, it is advisable to carry a vector control program in the endemic areas, destroying of animals' resen/oirs.

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