Main health problems among children In East of Cairo

Fatma Bayomi, Salah Mostafa, Hanan El Gamal& Abeer Elsherif

Medical studies Dep. For Children, Faculty of Postgraduate Childhood Studies, Ain Shams University

Abstract

Background: About 5.9 million children under- 5 still die each year, almost 1 million of them on their first day of life. The vast majority of these deaths are caused by complications and illnesses for which there are known, affordable treatments.

Objective: To survey and assess the main health problems among sample of children attending a medical center of MOHP in the East of Cairo.

Methodology: This study is a cross sectional one done on 150 children attending Hadaek El Kobba primary health care clinic, MOHP, chosen randomly during the period between November 2016 up to January 2017. Patients' age ranging from months up to 18 years from both sexes males and females.

Results: Parasite infestation among study group: showed that Entamoeba Histolytica was the most predominant parasitic infestation among my group with percentage of 45%, Oxyuris was the second predominant while Giardia Lamblia was the least with percentage 15%. Upper respiratory tract infections were the most prevalent diseases representing 28.7%, and then nutrition diseases 27.3%, combined 23.3%, GIT 14.7% and skin diseases were 6% the least prevalent among the group of children in the present study.

Conclusion: Respiratory tract infection and parasitic infestations are the most common health problems among children attending medical center of MOHP in East Cairo.

Keywords: Health problems- Morbidity- Mortality- Children- Respiratory tract infection- parasitic infestations.

المشاكل الصحية الرئيسية بين الأطفال فى شرق القاهرة

الهدف: مسح وتقييم المشاكل الصحية الرئيسية بين عينة من الأطفال الذين يحضرون مركز طبى بوزارة الصحة والسكان فى شرق القاهرة.

المنهجية: هذه الدراسة هى دراسة مقطعية. تم تصميم دراسة وبائية لقياس المشاكل الصحية الرئيسية فى العيادة الخارجية فى مركز رعاية صحية أولية. ولقياس التغير فى انتشار المشاكل الصحية الرئيسية بين الأطفال الذين حضروا بالمركز ومحدداتها، لتعزيز العوامل الإيجابية وتجنب السلبية. وتمت الدراسة فى العيادات الخارجية بمركز صحى أولى فى شرق القاهرة. وسوف تشمل على مرضى مترددى عيادة الاطفال يوميا لمدة ٤ ايام فى الاسبوع. معايير الاشتراك فى الدراسة: الأطفال من سن (٠– ١٨) سنة. تم اخذ موافقة شفهية من كل الطفل اذا كان عمره يسمح وموافقة كتابية مسبقة من احد الاباء والبيانات الشخصية: الاسم، السن، الجنس، المستوى الاقتصادى والاجتماعى. الفحص الطبى: الطول، الوزن، محيط الرأس، مؤشر كتلة الجسم. فحص عام وخاص: الصدر، البطن، القلب، العين، الأذن. والتحاليل المعملية: صورة دم كاملة، تحليل بول وبراز. وتم تصنيف الأمراض وتشخيصها وفقا لصحيفة التصنيف الإحصائى الدولى للأمراض والمشاكل الصحية ذات الصلة (ICD 10). وتم تجميع البيانات وتحليلها احصائيا بواسطة برنامج الكمبيوتر SPSS الاصدار ١٢، وأظهرت النتائج أن التهابات الجهاز التنفسى والاصابة بالطفيليات المعوية كانت أكثر المشاكل الصحية التى يعانى منها الأطفال المترددين على مركز وزارة الصحة بشرق القاهرة.

Introduction:

About 5.9 million children under five years still die each year, almost 1 million of them on their first day of life. The vast majority of these deaths are caused by complications and illnesses for which there are known, affordable treatments (USAID, 2016).

Objective:

The aim of the present study is to survey and assess the main health problems among sample of children attending a medical center of MOHP in the East of Cairo.

Methodology:

This cross sectional study was done on 150 children attending Hadaek El Kobba primary health care clinic, MOHP, chosen randomly during the period between November 2016 up to January 2017.

For each child verbal approval ws taken from the child if he is old enough and written informed consent from one of his parents and the following methods were done:

1. Personal Data: Including: name, age, sex, socioeconomic status.
2. Clinical Examination: height, weight, head circumference, Body Mass Index (BMI). General examination and Special examination as Chest- Abdomen- Heart- Eye- Ears.
3. Lab. Investigation: complete blood picture, stool and urine analysis.

Diseases were classified and diagnosed according to The International Statistical Classification of Diseases and Related Health Problems (ICD 10).

Statistical analysis:

The data will be collected and statistically analyzed using computer programs (SPSS software version 12).

Ethical Considerations:

Approval of the study by Ethical Scientific Research Committee, Faculty of Postgraduate Childhood Studies and commitment to the ethical scientific considerations (IPGSC, 2014).

Results:

Table (1) shows parasite infestation among studied children.

Table (1) Distribution of parasite infestation among study group

	Frequency	Percent
Entamoeba Histolytica	9	45.0
Oxyuris	8	40.0
Giardia Lamblia	3	15.0
Total	20	100

Table (2) Mean and standard deviation of numerical values: weight in kilogram, height in meter, Body Mass Index

	N	Mean	±Standard Deviation
Weight	150	15.6	7.7
Height	127*	1.9	11.5
BMI	127*	15.6	2.9

*The Only Available Data

Table (2) shows that weight (in Kilogram) in relation between URTI and Nutrition related diseases, P= 0.026. Weight (in Kilogram) in relation between Nutrition related diseases and GIT, P= 0.004. Weight (in Kilogram) in relation between Combined diseases and Skin diseases, P= 0.013.

Table (3) shows the main diagnosis among studied children.

Table (3) Main diagnosis by grouping

Disease	Frequency	Percent
Upper Respiratory Tract Infection	43	28.7
Nutrition Problems	41	27.3
Combined Problems	35	23.3
GIT Problems	22	14.7
Skin Problems	9	6.0
Total	150	100

Table (4) shows the relation between Mode of delivery and the health problems.

Table (4) Mode of delivery in relation to diseases groups

		URTI	Nutrition	GIT	Skin	Combined
Vaginal	Count	13	17	9	7	20
	%	30.2%	41.5%	40.9%	77.8%	57.1%
CS	Count	30	24	13	2	15
	%	69.8%	58.5%	59.1%	22.2%	42.9%
Total	Count	43	41	22	9	35
	%	100%	100%	100%	100%	100%

This relations are significant Chi2= 10.03, P= 0.040

Discussion:

Results in the present study showed that females were (60.7%) double percentage of males (39.3%). Cesarean section (CS) delivery represented 56% of the studied cases.

Based on the WHO systematic review, increases in caesarean section rates up to 10- 15% at the population level are associated with decreases in maternal, neonatal and infant mortality (Betran et.al., 2015).

Hansen et.al. (2008) studied 2687 infants who were delivered by elective caesarean section. Compared with newborns intended for vaginal delivery, an increased risk of respiratory morbidity was found for infants delivered by elective caesarean section at 37 weeks' gestation (odds ratio 3.9, 95% confidence interval 2.4 to 6.5), 38 weeks' gestation (3.0, 2.1 to 4.3), and 39 weeks' gestation (1.9, 1.2 to 3.0). The increased risks of serious respiratory morbidity showed the same pattern but with higher odds ratios: a fivefold increase was found at 37 weeks (5.0, 1.6 to 16.0). These results remained essentially unchanged after exclusion of pregnancies complicated by diabetes, pre- eclampsia, and intrauterine growth retardation, or by breech presentation.

Oonagh et.al. (2018) Studied long- term risks and benefits associated with cesarean delivery for mother, baby, and subsequent pregnancies in a systematic review and meta- analysis. Their results showed one RCT and 79 cohort studies (all from high income countries) were included, involving 29928274 participants. Compared to vaginal delivery, cesarean delivery was associated with decreased risk of urinary incontinence, odds ratio (OR= 0.56) and pelvic organ prolapse (OR= 0.29). Children delivered by cesarean delivery had increased risk of asthma up to the age of 12 years (OR= 1.21) and obesity up to the age of 5 years (OR=1.59).

In the present study, parasite infestation showed that Entamoeba Histolytica was the most predominant parasitic infestation among my group with percentage of 45%, Oxyuris was the second predominant while Giardia Lamblia was the least with percentage 15%.

Gastrointestinal protozoon parasites are a major health problem with a high prevalence worldwide. The prevalence of parasitic diseases depends on environmental, social and economic factors to such an extent that the presence of intestinal parasites is an indicator of vast collective ill- health. In Egypt, parasites are considered to be the main etiologic agent of diarrhea, with prevalence among individuals suffering diarrhea reaching 61%.

According to one survey, on patients with gastrointestinal troubles, the prevalence of helminth infection was 9.9% while the prevalence of intestinal protozoa infection was 57.6%. In a survey conducted in the Delta region, 67.1% of chronic diarrheic patients suffered from parasitic infections. Single infection represented 54.2% of all patients, and mixed infections were present in 12.9% of total chronic diarrhea patients. A high incidence of intestinal protozoa infection has been reported among both immunosuppressed and immunocompetent patients in Egypt.

The prevalence of E. histolytica in Egypt varies from 0% to 57% in diarrheic patients. In comparison to other African countries, E. histolytica infection in Egypt tends to be asymptomatic at high rates (> 21%), whereas the rate of infection in South Africa and Cote d'Ivoire ranges between 0 and 2%. In animals, amoebiasis has been reported in wild animals as well as domestic animals. In addition, the prevalence of E. coli among outpatients in the Dakahlia Governorate was 9.7%.

Giardiasis is a major diarrheal disease found throughout the world. In most mammals, giardiasis is caused by Giardia intestinalis, which is also called G. duodenalis. However, the two older names for the organism, G. lamblia and Lamblia intestinalis, are no longer considered to be taxonomically valid. The rate of human infection with G. intestinalis in Egypt varies between 10 and 34.6%. Among children, the prevalence of G. intestinalis was 11% and 15.4%. Among chronic diarrhea patients, the prevalence reaches 27.3%. The most frequent genotype of G. intestinalis is the assemblage B (80%).

In the present study, weight (in Kilogram) in relation between URTI and Nutrition related diseases (P= 0.026). Weight (in Kilogram) in relation between Nutrition related diseases and GIT (P= 0.004). Weight (in Kilogram) in relation between Combined diseases and Skin diseases (P= 0.013). Upper respiratory tract infections were the most prevalent diseases representing 28.7%, and then nutrition diseases 27.3%, combined 23.3%, GIT 14.7% and skin diseases were 6% the least prevalent among the group of children in the present study.

Acute respiratory tract infection (ARTI) is a major cause of morbidity and mortality worldwide, particularly in children (O'Grady et.al., 2010). An estimated 1.9 million children die from ARTI every year, with 70% of the mortality occurring in Africa and Southeast Asia (Williams et.al., 2002). Most respiratory tract infections are caused by viruses (Khor et.al., 2012).

According to the World Health Organization (WHO), the death rate from bronchiolitis is greatest in Egypt at 31 deaths per 1 million people; by comparison, the death rate from bronchiolitis in the United States is 0.8 per 1 million people (WHO, 2010).

The World Health Organization (WHO) estimates there are 156 million cases of pneumonia each year in children younger than five years, with as many as 20 million cases severe enough to require hospital admission (Rudan et.al., 2008). In the developed world, the annual incidence of pneumonia is estimated to be 33 per 10.000 in children younger than five years and 14.5 per 10.000 in children 0 to 16 years (Harris et.al., 2011).

Conclusion:

Respiratory tract infection and parasitic infestations are the most common health problems among children attending medical center of MOHP in East Cairo.

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