

Skin Disease among aged 1-17 years in displaced people in City of Mosul, Iraq

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ABSTRACT

Background: The fact that there are more children with skin diseases indicates that the disease is a significant reason for children's health issues. Knowledge about the prevalence of skin diseases is minimal.

Aim: To compare, in general practice, the occurrence of skin diseases in infants.

Methods: This study has compared the data of all children aged 1-17 years from two different surveys. A longitudinal register of GP consultations was made over 12 months. For each disease episode, a primary care provider diagnosed and coded it. Incident rates for skin diseases were calculated by dividing all new cases by the average study population at risk. Socio-demographic characteristics were stratified.

Results: The overall incidence rate of all skin diseases decreased between 2018 and 2019. Incidence increased among babies. Girls got more skin problems. In general practice, cases of specific skin diseases increased, whereas warts, skin injuries and contact dermatitis decreased.

Conclusion: In total, the incidence rate of all skin diseases decreased, while the incidence rates of bacterial, mycotic, and atopic skin diseases increased.

Keywords: Skin, displaced, Iraq, Mosul

INTRODUCTION

Iraq has been plagued by the worst humanitarian disaster in decades. There has been a massive increase in violence in Iraq which has resulted in over 3.5 million civilians internally displaced¹. Skin diseases are widespread. BSE affects all races, occurring at all ages and affecting around 30-70% of the population. The GBD shows that about 30% of the world's population is affected by skin diseases at least once in their lifetime. Skin infections are one of the most common types of disease in the world². It is known fact that people with low SES have poorer health. Poor health has been found to be associated with poverty³. Although common skin diseases have not been recognized as a significant public health problem, it is still important to take care of them. The article focuses on some less common, but more prevalent, health problems in the same countries⁴. Complaints are mostly due to the belief that minor skin conditions are harmless, and do not merit such drastic measures. Still, some countries have high demands for more effective measures. This report presents comprehensive data on the epidemiology of common skin disorders and the importance of controlling this problem⁵. For the purpose of estimating the incidence rates of diseases affecting children and teenagers, we have conducted a detailed study of skin diseases witnessed in 2018 and 2019.

METHODOLOGY

For the period from January 10th, 2020, through May 20th, 2020, a retrospective research was conducted to achieve the objectives of the study. The study was carried out in Mosul, a city in Iraq. Data were collected for the period from April 15, 2020 to April 28, 2020. Socio-demographic features, such as socio-economic status (SES) and race, were assessed through questionnaires completed by parents or by children themselves if they were over 12 years of age. Seasons

were examined from April to June in "spring," from July to September in "summer," from October to December in "autumn," and from January to March in "winter." From digitized records of patients, demographic data that includes age and gender were ascertained. This research focused on cases involving patients under 14 years old and focusing on skin diseases. In general practice, for all combined skin diseases and for each skin disease separately, the number of people diagnosed is being reported using a different code. We defined the occurrence rate by dividing the total number of new episodes (the numerator) by the study population at risk, multiplied by the follow-up time (the denominator) (denominator). Less than 0.5% of skin morbidity was not accounted for and were entered into the combined residual group. A pilot study was conducted over a period of 10 days from 1 February 2020 to 10 February 2020 to identify the potential obstacles to conducting the study and acquire the necessary data to do so. The face and content validity of the research instruments were achieved by going through several rounds of review by a panel of experts who are familiar with the field. Data has been analyzed in several phases. First, descriptive statistics, which include frequency and percentages, are used. Data are prepared, organized, and entered in the computer file; statistical analysis is performed on this data with SPSS.

RESULTS

The findings of the present study show that the overall incidence rate of combined skin diseases decreased significantly from 317.4 per 1000 person-years to 287.5. Skin diseases are most common in children under one year. More girls than boys suffer from skin diseases in 2019. In rural areas, people presented with skin diseases at higher rates, while their rates in urban areas decreased. Compared to non-manual and farmers, the incidence rate of skin diseases was lower for children from SES classes I,

II, IV, and V in 2018. Among lower SES patient population, the skin disease incidence rates were higher. The 2018 incidence rates for different age categories and how those rates compare with the crude incidence rate for 2019 are shown in Table 2. Eighty-seven percent of skin-related conditions present to the doctor, while dermatologic problems account for more than 50 percent of skin-related problems presented to the doctor. The rate of warts decreased by 23% in 2019 and they continue to be the

most common skin malady in children. Increases were seen in the incidence rate of impetigo, dermatophytosis, and atopic dermatitis in 2019, while decreases were seen in the incidence rate of viral skin infections. Cases of contact dermatitis and skin injuries decreased by the lower number. Symptoms of common skin diseases in children include diaper rash, dermatophytosis, moniliasis, and candidiasis.

Table 1: Incidence rates all skin diseases in 2018 and 2019.

2018			2019			
Incidence Rates	95% Confidence Intervals		Incidence Rates	95% Confidence Intervals		P-value
Age Categories						
< 1 year	152.1	121.0 – 385.5	160.8	141.0 – 481.3	<0.001	
1- 4 years	128.9	112.2 – 346.2	120	111.8 – 328.3	0.35	
5 – 9 years	140.3	125.4 – 355.7	173.7	167.1 – 280.5	<0.001	
10 – 14 years	176.2	162.8 – 290.1	135.3	129.1 – 241.6	<0.001	
15 – 17 years	119	102.5 – 336.3	166.9	158.3 – 275.7	<0.001	
Gender						
Male	115.9	105.5 – 326.5	179.2	174.2 – 284.3	<0.001	
Female	119	208.3 – 330.0	196.2	190.8 – 301.5	<0.002	
Season						
Winter	295.8	290.4 – 321.8	179.4	172.2 – 286.8	0.003	
Spring	296.6	122.5 – 351.1	194.5	187.1 – 302.1	<0.001	
Summer	19.3	102.9 – 336.4	192.5	185.1 – 300.0	0.004	
Autumn	194.9	191.1 – 319.2	172.7	165.8 – 279.8	<0.001	
SES						
Class I	105	289.3 – 321.2	165.2	158.6 – 271.9	<0.001	
Class II	125.2	304.1 – 347.4	178.8	170.8 – 287.0	<0.001	
Class III	164.2	232.2 – 299.4	199	184.4 – 314.0	0.06	
Class IV	120.9	322.1 – 360.6	199.5	183.6 – 316.1	0.001	
Class V	126.4	315.8 – 358.0	183.2	170.4 – 296.5	<0.001	
Total [†]	127.4	309.9 – 325.0	187.5	183.8 – 291.2	<0.001	

Table 2: Incidence rates skin diseases in 2018 and 2019

		< 1	1-4	5-9	9-11	11-15	15-17
		year	years	years	years	years	Years
"Bacterial	"Impetigo	18.6	29.4	27.7	13.4	7.3	20.5
Infections	Localized skin infections	10.2	9	9.1	7.4	9.4	8.8
	Infected finger/ toe/ paronychia	7.7	7.3	5.3	5.1	3.2	5.5
	Carbuncle/cellulitis	0.9	2	2.8	2	3.1	2.4
	Erysipelas/erythrasma	2.3	2.4	1.4	1.5	2.3	1.9
Viral	Warts	0.7	13.7	54.8	38.7	27.4	34.3
Infections	Mollusca contagious	2.3	18.1	17	1.4	0.3	9.5
	Herpes Simplex skin/ lip	1.8	2.6	1.2	1.8	1.8	1.8
	Herpes zoster	0	1.6	1.4	2.1	1.5	1.6
Fungal	Dermatophytosis	41	24.7	20.3	24.6	29.6	25.4
Infections	Moniliasis/candidiasis	112.9	12.5	1.4	1	1.2	9.8
Parasitic infestations	Insect bite	9.3	11.8	6.9	4	4.7	7
Dermatitis	Contact dermatitis/other eczema	31.1	24.6	18.9	19.8	28.5	22.9
	Atopic dermatitis	90.9	26	9.5	7.1	6.5	16.5
	Seborrheic dermatitis	24.7	3.3	2.4	5.2	5.3	5.1
	Diaper rash	48.5	10.3	0.2	0	0	4.9
	Pityriasis rosea	0.2	0.5	1.1	2.1	2.8	1.5
Neoplasms [†]	Naevus/mole	1.4	1.3	4.5	7.9	11.9	5.8
	Local swelling/ mass	8.2	4.6	3.9	4	5	4.5
	Other benign neoplasms	1.8	1	1.6	3.1	5.1	2.5
	Sebaceous cyst [†]	1.4	1.3	1.4	2.2	5.2	2.2

DISCUSSION

Mosul is one of the flashpoints of the war for many years. This causes an increase in the number of homeless people. Displaced persons needs health care and Crowding, poor water quality, and poor sheltering conditions can increase the risk of skin infections⁶. The

main aim of this study was to reveal the problems faced by displaced people in Ninevah province. Our research included only individuals who suffer from skin problems who attended the Dermatology Department in the City of Mosul. We believe that the results represent the skin

complaints among the internally displaced persons in Ninevah.

The most encountered disease group in the study was dermatitis and eczema (73.2%). In previous studies conducted in Iraq, Saudi Arabia, Yemen, Mali, South Africa, Japan, Egypt, Nigeria, Peru, and Greece, dermatitis and eczema were the most encountered skin diseases⁷⁻¹⁵. Contact dermatitis was the most encountered disease in this disease group. One study found that skin infections are the most common infectious disease among the refugees¹⁶. Another study found that skin infections were the most common infection among the refugees in Chad^{17,18}. In this study, human fungal skin infections were more common than bacterial infections and higher than in Libya¹⁶ and in Spain¹⁸ respectively. Many of the contributing factors to this problem accelerated the spread of viral infections among displaced people. A study conducted in Al-Najaf (at the time of the main Islamic prophet, Mohammad) among displaced people found that, in comparison to the patients who did not have the disease, those who had it (molluscum contagiosum) were more likely to (be affected by) become infectious to others (acquiring the disease from another). Skin infections were the second most common category of skin disorders encountered among displaced patients, as this figure is evident to the extreme climatic conditions in Iraq. This seasonal variation might increase the incidence of skin diseases, especially dermatitis, which is commonly encountered in those desert areas. According to this analysis, different disorders are associated with different years (P-value is 0.05). The most common age group represented was (less than 10 years old) (48%). This result is consistent with those in Libya (4), Chad¹², and Spain¹³, as most of the population seeking for medical help are urban residents (6%). Moving from the city away from health centers decreased the rate of patients that failed to present for their minor skin diseases. The minimum estimate of the prevalence of the study's patients who might be poor residents is set at 3.5%. This result shows that prevalence of skin diseases among patients is significantly higher in rural areas than in urban areas in Iraq. This shows that people living in the refugee camps have more infectious skin diseases than those living in the community. This is maybe because they were living in overcrowded houses. This agrees with the results of the national studies in Egypt^{12,19,20,21} and in Basra²², since almost half of the displaced patients had non-communicable diseases that did not cause fatal conditions (91%). The findings showed significant relationships between economic status and having seen a doctor, and they were highly significant (P-value is 0.05). The main reason why this person was left without receiving treatment is lack of awareness. This study agrees with other studies that crowding cause higher risk of infectious diseases, as this study found that the most of IDPs are living with a household with high pressure level (90%). These papers show that poor living conditions could be a cause of diseases. This result agrees with other findings in Erbil²³, Mosul²⁴, and Turkey^{25,26,27}. Well-designed health education measures should be adopted to avoid skin infections. Provide free consultations and treatment for the IDPs in rural areas and camps. More local ethnographic studies are necessary to complete the picture of IDPs' skin problems.

CONCLUSION

Some acne, fungal infections, contact dermatitis, and urticarial skin diseases tend to cause severe health problems. To manage these issues rationally, public health strategies should be enforced.

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