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Prevalence of scabies in Iraqi patients attending dermatology clinic in Al-Kadhimiya hospital

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Abstract

Background: Scabies is a global problem and a significant source of morbidity among people because it is an annoying disease that disturbs the life of individuals. Aim of study: To assess scabies prevalence in Iraqi dermatology clinic patients at AL-KADHIMIYA hospital and recommend prevention, control, and patient education.

Method: This cross-sectional "descriptive" study was conducted at the dermatology and venereology department of AL-KADHIMIYA teaching hospital in Baghdad, Iraq, from November 1, 2011 to April 30, 2012.

This study included 200 males, females, children, and adults aged 1 to 80 with scabies, all of whom had a presumptive diagnosis on a dermatologist's report. The study sample was asked about their age, sex, occupation, educational level, residence, personal hygiene, overcrowding index, possible source of infestation, duration & timing of itching, and sites of burrows & papules, genital lesions, and maximum itching.

Results: This study saw 200 scabies patients, including males, females, children, and adults, ages 1 to 80. The disease was most common in children aged "below 10 years old" (31.5%), followed by adolescents (10–19 years old) and young adults (18.5%). The illness is more frequent in unhygienic people (59%) than clean people (41%). Most patients (49%) got the infection via relatives, followed by jails (21.5%) and military (20%). Itching onset was shorter than 1 month in 76.5 percent of patients. The illness is more common in overcrowded households with 2.1 -4 (50%) and 4.1 -5 & above (30.5%).

Conclusion: Scabies affects children and young people, especially men, those with lesser education, and those living in overcrowded settings. Transmission is mostly by intimate physical contact, especially among families, with many instances associated to prisons and military settings. In the first month of infection, nocturnal itching, papules, and burrows are most prevalent, peaking in winter.

Keywords: Prevalence, scabies, Iraqi, dermatology, clinic, Al-kadhimiya hospital

Introduction

Scabies, an extremely pruritic and pervasive cutaneous infestation, is frequently attributed to *Sarcoptes scabiei* var. *Hominis*. Only this species of burrowing mite is capable of being transmitted from one individual to another. Burrowing, papuling, and vesicle-like lesions occur on the epidermis as a consequence of this highly contagious parasitosis. Clinical diagnosis can be challenging at times, and scabies is frequently misdiagnosed due to general practitioners' typically minimal suspicion of the condition. It commonly impacts finger webs, wrists, axillary folds, the abdomen, buttocks, inframammary folds, and the genitalia in males. It is distinguished by severe pruritus at night ^[1, 2]. Close personal contact (Relatives, sexual partners, pupils, chronically ailing patients, and densely populated communities) is the mode of transmission for scabies. A conclusive diagnosis is achieved through the identification of scabies mites, their eggs, or faecal particles using a light microscope. Emerging diagnostic methodologies incorporate the application of epiluminescence microscopy ^[3, 4]. This infestation is not restricted to destitute regions, areas with inadequate sanitation, or areas with limited access to flowing water; it manifests globally. Consensus has long held that the most critical factor in transmission is close physical contact; thus, in most cases, all the children within a single family are implicated. With or without sexual contact, sharing a bed with an afflicted individual can lead to an infestation.

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Even swaying and hand-to-hand contact are capable of transmitting mites^[5]. The scabies mite is an exceptionally specialized organism that has evolved to its lifestyle and is incapable of surviving in the wild. It is incapable of jumping or walking and would perish in any environment with less than 100 percent humidity; it is blind and defenseless, and any distance from a human would be fatal^[6]. The aim of study to detect the prevalence of scabies in Iraqi patients attending dermatology clinic in AL-KADHIMYA hospital and suggest the plan for prevention, control and recommendations for patients about the disease.

Methods

This study utilized a cross-sectional, descriptive design to assess the prevalence and characteristics of scabies among patients attending the Dermatology and Venereology Department at AL-KADHIMYA Teaching Hospital in Baghdad, Iraq. Conducted over a six-month period from November 1, 2011, to April 30, 2012, it involved a sample of two hundred individuals diagnosed clinically with scabies by dermatologists. The cohort comprised males and females, children and adults, with an age range from 1 to 80 years, representing a wide demographic spectrum. The study aimed to gather comprehensive data on scabies within this population, focusing on demographic details, hygiene practices, living conditions, and clinical symptoms associated with the infestation. To this end, all participants were asked to complete a detailed questionnaire that covered aspects such as age, gender, occupation, education level, place of residence, personal hygiene habits, overcrowding index, potential sources of infestation, and the duration and timing of itching. Additionally, a thorough physical examination was conducted for each patient to identify the presence of scabies-specific signs such as burrows, papules, genital lesions, and areas of maximum itching. The inclusion criteria for the study were straightforward: any patient with a clinical diagnosis of scabies made by a dermatologist at the AL-KADHIMYA Hospital's Dermatology Clinic was eligible to participate. There were no explicit exclusion criteria mentioned, aside from individuals who declined to complete the questionnaire or who were unavailable during the data collection periods. This approach aimed to maximize participation and ensure a representative sample of scabies patients within the hospital's catchment area. Ethical approval for the study was secured from the directorate of the Arab Board of Medical Specialties, specifically the Family Medicine branch, ensuring that the research was conducted in accordance with established ethical standards and guidelines. Data analysis was performed using the Statistical Package for the Social Sciences (SPSS) software, version 19. The Chi-squared test was employed to explore associations between various variables, such as demographic factors, hygiene practices, and clinical characteristics, to identify significant patterns and trends in scabies infestation within the study population. This methodological approach facilitated a comprehensive analysis of scabies' prevalence and contributing factors, providing valuable insights into the disease's dynamics in an urban Iraqi setting.

Results

In this study conducted at the AL-Kadhimiya Teaching Hospital, 200 out of 4,320 patients attending the

dermatology clinic over six months were diagnosed with scabies, resulting in a prevalence rate of 4.63%. The patient demographic spanned from 1 to 80 years old, including males, females, children, and adults. The incidence of scabies was highest among children under 10 years old, at 31.5%, followed by adolescents and young adults between 10 and 29 years old at 18.5%. Adults in the 30 to 39 years age bracket had a prevalence of 12.5%, with those 50 years and older at 10.5%, and the 40 to 49 years age group at 8.5%. These findings indicate a significant correlation between age and the occurrence of scabies. The gender distribution exhibits a slight male predominance of 54.5% over 45.5% (a ratio of 1.19: 1). The correlation between gender and scabies is not evident based on the findings. Scabies is more prevalent in single people (69%) than married people (31%), suggesting a link between the two. The disease is most common in primary school students or graduates (27.5%), followed by preschool children (25%), intermediate school students or graduates (21%), secondary school students or graduates (13.5%), illiterate patients (11.5%), and higher school students or graduates (1.5%). The finding shows a link between scabies and schooling. As shown in table 1. According to patient occupation, housewives (26.5%) had the most disease, followed by preschoolers (25%) and students of various school levels (17%). Other occupations included workers (13.5%), civil officials (11.5%), and military patients (6.5%). The results show a link between scabies and patient occupation. According to patient residence, 94% were urban and 6% rural. Scabies and residence are linked, according to the study. Overcrowded families (overcrowding index "2.1_4" (50%) and "4.1_5 & above" (30.5%) are more likely to have the disease than families with overcrowding index less than 2 (19.5%). Scabies and overcrowding index are linked, according to the study. About half of patients got the infestation from family members (49%), followed by prisons "either patient himself or contact with prisoner" (21.5%), military sources (20%), hotels (3%) and schools (3%) and unknown sources (3.5%). Scabies and probable infestation sources are linked, according to the outcome. As shown in table 2. The majority of patients had itching less than 1 month (76.5%), followed by 1_3 months (20%) and more than 3 months (3.5%). Scabies and itching duration are linked, according to the study. The study (between November and April) found that 87% of itching instances occurred in winter (cold weather) and 13% in spring (hot weather). Scabies and itching season are linked, according to the study. The majority of patients (88%) had night itching, whereas the remaining (12%) had day and night irritation. The result links scabies to itching time. According to personal hygiene, the disease was more prevalent in patients with bad hygiene (59%) than those with good hygiene (41%), in a ratio of 1.43: (bad hygiene: good hygiene). Good hygienic patients wash their bodies daily or twice weekly "In winter" and don't share clothes or beds. Any patient without regular body wash, sharing clothing, or sharing beds has poor hygiene. Scabies and personal cleanliness are linked, according to the study. By skin lesion type, 67% of patients had burrows and papules, whereas 33% had papules exclusively. Scabies is linked to skin lesion kind, according to the results. As shown in table 3.

Table 1: Distribution of patients according to variables of study.

Category	Subcategory	Frequency	Percentage
Age Groups	< 10 years	63	31.5%
	10 – 19 years	37	18.5%
	20 – 29 years	37	18.5%
	30 – 39 years	25	12.5%
	40 – 49 years	17	8.5%
	>= 50 years	21	10.5%
Gender	Male	109	54.5%
	Female	91	45.5%
Marital Status	Single	138	69%
	Married	62	31%
Educational Level	Preschool children (up to 6 years old)	50	25%
	Illiterate	23	11.5%
	Primary	55	27.5%
	Intermediate	42	21%
	Secondary	27	13.5%
	Higher	3	1.5%
Occupation	Preschool	50	25%
	Student	34	17%
	Civil official	23	11.5%
	Military person	13	6.5%
	Housewives	53	26.5%
	Others (workers)	27	13.5%

Table 2: Distribution of patients according to variables of study.

Category	Subcategory	Frequency	Percentage
Residence	Rural	12	6%
	Urban	188	94%
Overcrowding Index	1-2	39	19.5%
	2,1-4	100	50%
	4,1-5 & above	61	30.5%
Source of Infestation	Other member of family	98	49%
	Prisons	43	21.5%
	Military	40	20%
	Schools	6	3%
	Hotels	6	3%
	Unknown	7	3.5%
Duration of Itching	Less than one month	153	76.5%
	1-3 month	40	20%
	More than 3 month	7	3.5%

Table 3: Distribution of patients according to variables of study.

Category	Subcategory	Frequency	Percentage
Season of Itching	Spring	26	13%
	Winter	174	87%
Time of Itching	Night	176	88%
	Both (Day & Night)	24	12%
Personal Hygiene	Bad	118	59%
	Good	82	41%
Type of Skin Lesion	Papules	66	33%
	Papules & Burrows	134	67%

Discussions

This study conducted at the AL-KADHIMYA Teaching Hospital in Baghdad, Iraq, investigates the prevalence and characteristics of scabies, focusing on demographic factors, sources of infestation, and clinical features among 200 diagnosed patients. Highlighting a higher susceptibility in younger populations, findings reveal the highest incidence of scabies in children below 10 years old (31.5%), adolescents (10-19 years old), and young adults (20-29 years old) at 18.5%, mirroring the patterns observed in prior studies by Sharquie E.K. & Samer A.D. (1997) [7], Hogan D.J. et al. (2008) [8], and a 2009 Indian retrospective study involving over 30,000 children [9]. This trend is attributed to

the close contact environments of educational institutions, which facilitate disease transmission. A slight male predominance was observed with a male-to-female ratio of 1.19:1, and a significant proportion of the cases were among the unmarried population (69%), suggesting lifestyle factors such as less frequent washing of clothes and towels might contribute to the disease's spread. Educational level also played a role, with the highest rates among primary school students or graduates (27.5%), followed by preschool children (25%), indicating that poor health education and self-care practices among these groups may increase susceptibility. This aligns with findings by AL_Badri A.A. (1994) [10] and Feldmeier H et al. (2009) [11], highlighting the association of scabies with lower educational levels and poor living conditions. Occupationally, housewives constituted a significant portion of the cases (26.5%), potentially due to their contact with contaminated household items. Interestingly, the study observed a higher urban prevalence (94%) over rural (6%), contradicting findings from Feldmeier H et al. (2009) [11] that suggested higher rural incidences due to poorer living conditions. This urban predominance may reflect the ease of access to the hospital from city areas compared to rural settings. The overcrowding index further underscored scabies'

transmissibility, with a higher prevalence in densely populated households. About half of the patients (49%) acquired scabies from family members, emphasizing the importance of treating all close contacts to prevent reinfestation. This family transmission is consistent with historical observations by van der Linden^[12], reinforcing the highly contagious nature of scabies within household settings. Clinical presentations predominantly included papules and burrows (67%), with the majority of patients experiencing symptoms within the first month of infestation (76.5%), indicating the immediate and disruptive impact of scabies on daily activities. This is supported by the study of Strong M (2007)^[13], which notes the onset of symptoms between 4-6 weeks after initial infection. Seasonality also influenced disease presentation, with a vast majority of cases occurring during winter months (87%), likely due to increased indoor activity and proximity between individuals, a pattern also observed in a Polish study by Mitchell E et al. (2006)^[14]. Hygiene practices were notably associated with scabies incidence, with those exhibiting poor hygiene habits being more affected. This finding corroborates with Green M.S. (1989)^[15], which linked scabies to crowded and unhygienic living conditions. However, the disease also occurred in individuals with good hygiene, albeit to a lesser extent, highlighting scabies' capacity to affect a broad demographic spectrum regardless of cleanliness practices.

Conclusion

The prevalence of scabies in Iraqi patients at AL-KADHIMYA Hospital's dermatology clinic is notably high at 4.63%, likely influenced by post-2003 war effects, immigration, poverty, and increased incarceration rates. Children under 10, adolescents, and young adults, particularly males and those with lower educational levels, are most affected. Overcrowded living conditions and poor hygiene practices significantly contribute to transmission, with family members, prisons, and military facilities being common sources. Symptoms, including nocturnal itching and the appearance of papules and burrows, predominantly manifest within the first month, especially during colder months.

References

1. Wendel K, Rompalo A. Scabies and pediculosis pubis: an update of treatment regimens and general review. *Clin Infect Dis*. 2002 Oct 15;35(2):S146-51. Doi:10.1086/342102. PMID: 12353201.
2. Orion E, Matz H, Wolf R. Ectoparasitic sexually transmitted diseases: scabies and pediculosis. *Clin Dermatol*. 2004 Nov-Dec;22(6):513-9. doi: 10.1016/j.clindermatol.2004.07.004. PMID: 15596323.
3. Estrada B. Ectoparasitic infestations in homeless children. *Semin Pediatr Infect Dis*. 2003 Jan;14(1):20-4. Doi: 10.1053/spid.2003.127213. PMID: 12748918.
4. Markell, John EK, Petri DC, William H. Markell and Voge's medical parasitology (9th ed.). St. Louis, Mo: Elsevier Saunders. ISBN:2006: 0-7216-4793-6.
5. Lanska DJ. Chapter 33: The history of movement disorders. *Handb Clin Neurol*. 2010;95:501-46. doi: 10.1016/S0072-9752(08)02133-7. PMID: 19892136.
6. Burkhart C, Burkhart K. An epidemiologic and therapeutic reassessment of scabies, cutis. 2000;65(4):233-40.
7. Sharquie EK, Samer AD. Post-scabietic allergic nodules, Clinical and Histopathological study. *Pan Arab League of Dermatology*. 1997;83:29-35.
8. Hogan DJ, Vinson RP, Krusinski P, Gelfand JM, James WD. Scabies. *Emedicine*. 2008;15:5.
9. Sardana K, Mahajan S, Sarkar R. The spectrum of skin disease among Indian children. *Pediatr Dermatol*. 2009;26(1):6-13.
10. AL - Badri AA. Epidemiological and therapeutic study in Baghdad. Master Thesis of Community Medicine, College of Medicine, University of Baghdad; c1994. p. 93-94.
11. Feldmeier H, Jackson A, Ariza L. The epidemiology of scabies in an impoverished community in rural Brazil: presence and severity of disease are associated with poor living conditions and illiteracy. *JAAD*. ~ar 2009;60(3):436-43.
12. van der Linden N, van Gool K, Gardner K, Dickinson H, Agostino J, Regan DG, *et al*. A systematic review of scabies transmission models and data to evaluate the cost-effectiveness of scabies interventions. *PLoS Negl Trop Dis*. 2019 Mar 8;13(3):e0007182. Doi:10.1371/journal.pntd.0007182. PMID: 30849124; PMCID: PMC6426261.
13. Strong M, Johnstone P. Interventions for treating scabies. *Cochrane Database Syst Rev*. 2007 Jul 18;2007(3):CD000320. Doi:10.1002/14651858.CD000320.pub2. PMID:17636630; PMCID: PMC6532717.
14. Mitchell E, Bell S, Thean LJ, Sahukhan A, Kama M, Koroivueti A, *et al*. Community perspectives on scabies, impetigo and mass drug administration in Fiji: A qualitative study. *PLoS Negl Trop Dis*. 2020 Dec 4;14(12):e0008825. doi: 10.1371/journal.pntd.0008825. PMID: 33275592; PMCID: PMC7744044.
15. Green MS. Epidemiology of scabies. *Epidemiol Rev*. 1989;11:126-50.