



Genital Warts among Men in Baghdad/ Iraq: Characteristics and Public Health Concerns

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ABSTRACT

Introduction: Genital warts “caused by Human Papilloma Virus (HPV)” represent a common public sexually transmitted infection with notable psychosocial and public health considerations. Those infections are considered as important causes for both the genital warts and cervical cancers in the female population, however recent studies have demonstrated their role in the anogenital warts and malignancies in men also. Transmission of those infections can be effectively prevented with vaccination; however it is not yet part of the Essential Programme of Immunization (EPI) in Iraq. Understanding the characteristics of patients with genital warts could offer insights into disease patterns, delays in care (and its possible public health sequences), and the need for probable targeted public health interventions.

Aim: To describe the demographic and clinical characteristics of male patients with genital warts and their possible public health implications.

Methods: A descriptive cross-sectional study conducted on data of male patients attending a dermatology clinic in Baghdad/ Rusafa from Jan.2024 to Jun.2025 and diagnosed clinically with genital warts. Data included age, marital status, number of lesions, the duration of infection, and history of seeking health care. Analysis was performed by SPSS, applying chi-square test with a significance level ≤ 0.05 for the qualitative values, while means and other statistics were used for quantitative ones.

Results: The study included 47 male patients aged between 22 to 53 years (mean age: 35.9), the age groups 26-35 and 36-45 years accounted for 46.8% and 27.7% respectively. Among all patients, 63.9% were unmarried. Multiple genital wart lesions were present in 59.6% of cases, and 74.5% did not receive or seek a prior health care or treatment. Infection duration was less than six months in 55.3% of patients. There was a significant association between infection duration and both the presence of multiple lesions and a previous history of seeking health care, with a p-value of < 0.001 for both variables.

Conclusions: (1.) About three-quarters of patients were 26-45 years old, about two-thirds of them were not married, and most of them presented with multiple untreated lesions, this is highlighting the need to prioritize this age group in any future public preventive health strategies. (2.) Most patients did not seek a previous health care or treatment, indicating possible delayed diagnosis and limited prior medical intervention which could lead to further public wide transmission for both sexes in the community. (3.) The duration of infection was significantly associated with both the number of lesions and prior health care seeking, in which the longer duration was linked to clinical progression (multiple lesions) and to previous attempts at seeking medical care which appeared to be ineffective in resolving the condition.

Recommendations: (1.) Introduce HPV vaccination into Iraqi EPI (initially could be targeting adolescent females) to reduce the community transmission of HPV and its public health consequences, and to decrease the incidence of genital warts and their complications in both sexes. (2.) Raise public awareness about HPV transmission, symptoms, and preventive strategies, particularly among men in their 20s to 40s, with integration of HPV-related services in routine sexual health care and public health programmes. (3.) Encourage early medical consultation for genital lesions to reduce the duration of untreated infection and the risk of public transmission among both sexes.

Keywords: Genital warts, HPV, Male.

INTRODUCTION

Genital warts are one of the most common manifestations of infection with the Human Papilloma Virus (HPV). They represent a significant public health concern due to their high transmissibility, psychosocial impact, and potential association with other sexually transmitted infections. [1-4] HPV infections are considered as important causes of genital warts and cervical cancers in the female population; however recent decades of experience and studies have demonstrated the highlighted role of HPV infections in the anogenital warts and malignancies in men also. [5] Transmission of those infections can be effectively prevented with vaccination; however it is not yet part of the Essential Programme of Immunization in Iraq. The diagnosis is made clinically by the appearance of single or multiple lesions. [6] Among the hundreds of HPV serotypes, some strains have been considered important for humans. Based on the risk of oncogenicity, HPV infections are classified as low- risk and high- risk types; the low- risk types (6 and 11) are the cause of skin warts and benign genital warts “condyloma accuminata” while high-risk types (16, 18, 31, and 45) are predisposing agents for anogenital malignancies. [5] While the global burden of HPV- related diseases has been well documented in large-scale studies, data from private sector healthcare settings in countries with no HPV vaccination coverage “such as Iraq” remain scarce. In Iraq, genital warts are often diagnosed and managed in Dermatology clinics in the public Ministry of Health facilities or in the private sector, yet there is a continuous need for updating the data describing the demographic and clinical profiles of affected patients. Understanding the characteristics of patients who seek treatment for genital warts in such settings may offer insights into disease patterns, delays in care, and the need for probable targeted public health interventions. [7] This study aims to describe the clinical and demographic features of male patients with genital warts in Baghdad/ Iraq, and the possible public health implications with them.

METHODS

This descriptive cross- sectional study was conducted on gathered data from January 2024 till June 2025 for patients attending a Dermatology clinic located in Baghdad/ Rusafa (the eastern side of Iraqi Capital). The study included male patients who were clinically diagnosed with genital warts during their visits to the clinic. The inclusion criteria were: male gender, genital warts that were clinically diagnosed based on medical examination, and a verbal agreement to share anonymized data for research purposes. Female patients and cases with uncertain or atypical diagnoses were excluded. Data were retrospectively collected from patient records and included: age, duration of infection (in months), number of lesions (single or multiple), prior health care or treatment history, and marital status. The collected data were statistically analyzed by using the IBM SPSS programme – version 23. Figures and tables demonstrated the characteristics of the clinical and demographic features of the patients, and the chi- square test was used with a significant p- value of 0.05 or less for the qualitative values, while means and other statistics were used for quantitative ones.

RESULTS

A total of 47 male patients clinically diagnosed with genital warts were included in the current study. The patients' age ranged from 22 to 53 years, with a mean age of 35.9 years. After classification of the enrolled patients according to their age group, there were 46.8% and 27.7% for those who aged between 26- 35 and 36- 45 years respectively, as revealed by table (1).

Table 1: Classification of patients according to their age group

Age group (years)	Frequency	Percent
20-25	5	10.6%
26-35	22	46.8%

36-45	13	27.7%
46-55	7	14.9%

The duration of infection before presentation at the clinic varied from 1 to 27 months, with mean of 7.7 months. Among the patients included in the study, 55.3% reported symptoms for less than six months, while 44.7% had infections lasting six months or more, as manifested by figure (1).

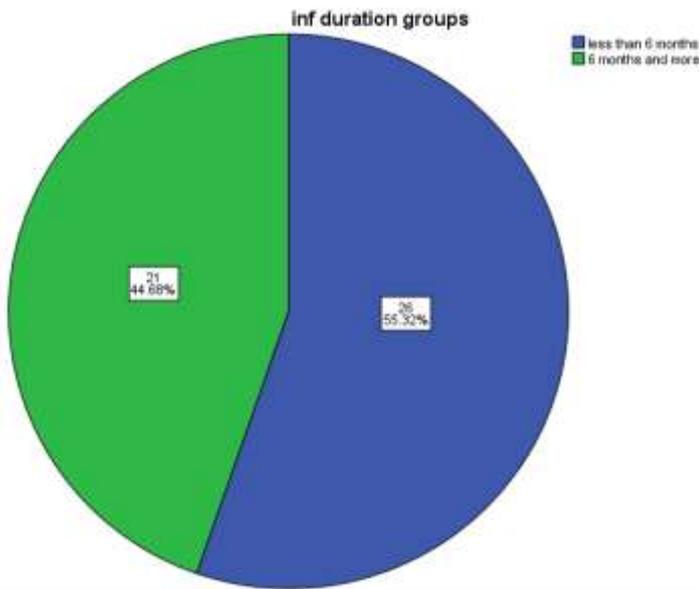


Figure 1: The frequency and percent of patients according to their duration of infection

Concerning the marital status, the data showed that 63.9% were unmarried (single) individuals and 36.1% were married, as shown in figure (2).

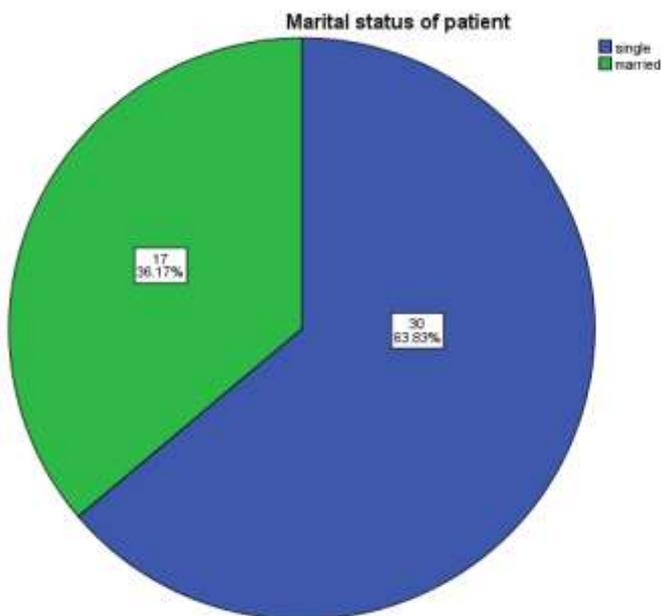


Figure 2: The frequency and percent of patients according to their marital status

Regarding lesion count, 59.6% of the patients presented with multiple lesions, while 40.4% had a single lesion, as shown by figure (3).

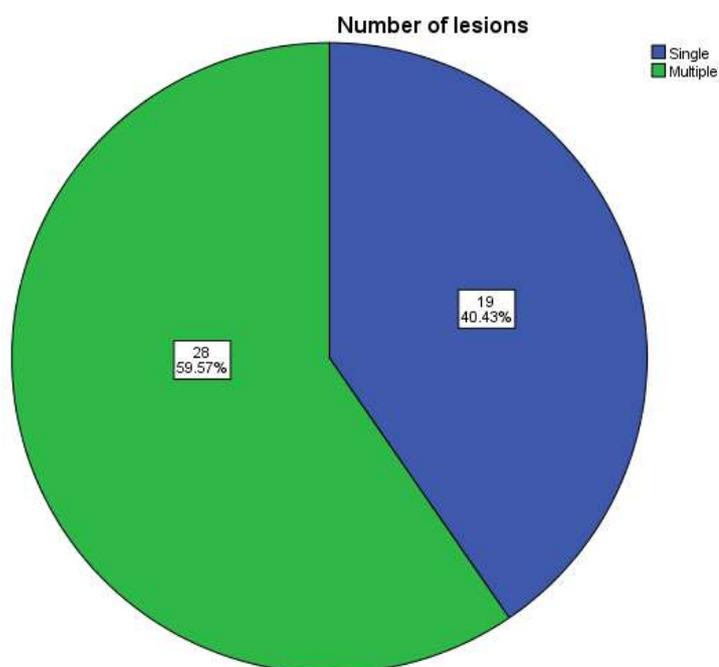


Figure 3: The frequency and percent of patients according to their lesion count

The status of seeking a previous treatment history revealed that only 25.5% of patients had received prior health care or treatment for their genital warts, while the remaining 74.5% did not seek any previous consultations prior to their presentation at the clinic, as revealed by figure (4).

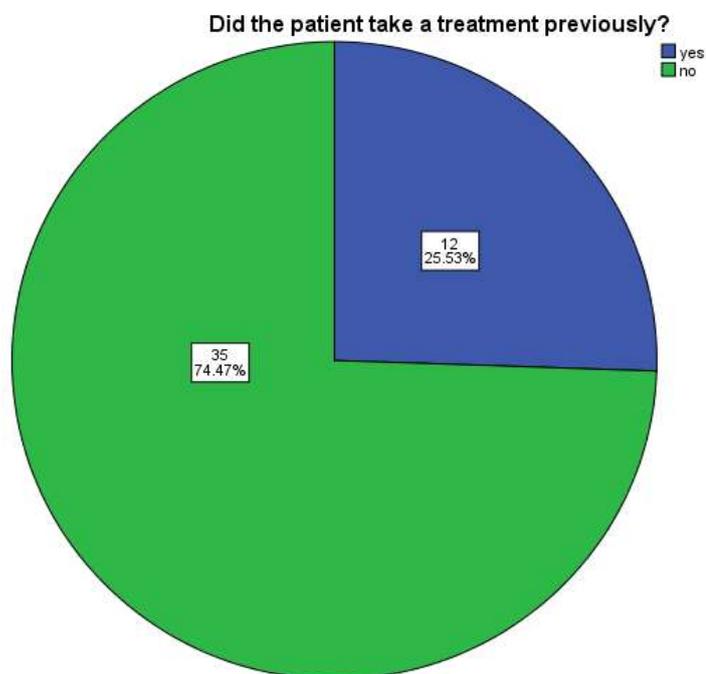


Figure 4: The frequency and percent of patients according to their status in seeking previous health care or treatment

Table 2 shows the association between duration of infection and other variables among the patients, in which a statistically significant associations were observed between infection duration and both the the number of lesions (p-value=0.000), and the status of seeking a previous health care consultation (p-value=0.000). No statistically significant associations were found between infection duration and other variables.

Table 3: The association between duration of infection and other variables among the enrolled patients

Variable		Less than 6 months; No. (%) n=26	6 months and more; No. (%) n=21	Chi square	p- value
Age	20-25	4 (15.4%)	1 (4.8%)	6.33	0.09
	26-35	13 (50%)	9 (42.8%)		
	36-45	8 (30.8%)	5 (23.8%)		
	46-55	1 (3.8%)	6 (28.6%)		
Marital status	Not married	15 (57.7%)	15 (71.4%)	0.94	0.33
	Married	11 (42.3%)	6 (28.6%)		
Number of lesions	Single	18 (69.2%)	1 (4.8%)	20.04	0.000 *
	Multiple	8 (30.8%)	20 (95.2%)		
Seeking health care previously	Yes	1 (3.8%)	11 (52.4%)	14.39	0.000 *
	No	25 (96.2%)	10 (47.6%)		

DISCUSSION

The findings of the current study reflect a population of adult males, mostly in their 20s to 40s, which could direct us toward a focused targeting this age group in any preventive health strategies. An Iraqi study carried out in 2018 also revealed that the most age group of genital warts in Erbil city (north) was 28- 37 years. [8] About two- thirds of the enrolled patients were not married (single individuals), and this may reflect a presence of relatively high non- marital relationships with all its probable wide- community transmission and the possible public health sequences of that issue. In contrast, an Iranian study carried out in 2018 showed that more than half of participants were married. [9] Slightly more than half of the enrolled patients in this study had a duration of infection for less than six months, most of them presented with multiple lesions and majority of those patients had not received or seek a prior health care or treatment, suggesting a pattern of delayed consultation or possibly limited awareness of the condition and available management options. Several factors may contribute to this delay, including lack of awareness, embarrassment due to the sensitive location of the lesions, stigma associated with sexually transmitted infections (STI), or limited access to affordable care. These patterns highlight the ongoing need for public health efforts that promote sexual health education and early STI detection among men (especially young ones) in Iraq. Moreover, the fact that majority of patients were health care- naive at the time of presentation may reflect gaps in access to care or knowledge about the treatability of genital warts. The statistically significant association between duration of infection and previous health care seeking suggests that patients with long-standing infections for more than six months had already attempted to access medical care. However, the persistence of genital warts indicates potential issues such as misdiagnosis, inadequate treatment, or lack of follow-up in previous consultation. In addition, a statistically significant association between duration of and number of lesions demonstrated that patients with infections lasting more than six months were significantly more likely to present with multiple lesions compared to those with recent infections, the majority of whom had single lesions, and this suggests that longer duration of infection is associated with clinical progression and increased lesion burden with all its possible sequences. A wide- spread study across five developed countries showed that one third of the enrolled patients had a delay in seeking health care because they thought that the condition would resolve on its own or that the problem was not serious. [10] Although the current study did not assess behavioral or sexual risk factors, its findings emphasize the importance of integrating sexual health awareness into community and clinical settings either in

the public facilities or in the private sectors. It is important to note that all diagnoses were made clinically, without virological confirmation or HPV typing. While clinical diagnosis is often sufficient in typical cases, HPV typing can provide further insights into the epidemiology of the disease and potential oncogenic risk, particularly with high- risk strains. ^[11] However, in many outpatient settings “including the present study” HPV testing is not routinely available due to cost or infrastructure limitations. Overall, this study underscores the need for broader community- based studies, educational interventions targeting men, and potential incorporation of HPV -related services in routine sexual health care and public health programmes. The possible future introduction of HPV vaccination programmes in Iraq, even if initially targeting females, could have a significant indirect benefit in reducing genital warts incidence among males, in addition this strategy may decrease the burden of HPV- related diseases and complications and reduce healthcare costs associated with treatment for both sexes. ^[12]

CONCLUSION

(1.) About three- quarters of patients were 26-45 years old. (2.) About two- thirds of them were not married. (3.) Most patients presented with multiple untreated lesions. (4.) Most of them did not seek a previous health care or treatment, indicating possible delayed diagnosis and limited prior medical intervention. (5.) The duration of infection was significantly associated with both the number of lesions and prior health care seeking, in which the longer duration was linked to clinical progression (evidenced by multiple lesions) and to previous attempts at seeking medical care which appeared to be ineffective in resolving the condition.

RECOMMENDATIONS

(1.) Introduce HPV vaccination into the Essential Programme of Immunization in Iraq, (initially could be targeting adolescent females), to reduce the community transmission of HPV and decrease the incidence of genital warts and their complications in both sexes. (2.) Raise public awareness about HPV transmission, symptoms, and preventive strategies, particularly among 20s to 40s age group men in Iraq, with integration of HPV -related services in routine sexual health care and Iraqi public health programmes. (3.) Encourage early medical consultation for genital lesions among Iraqi men, to reduce the duration of untreated infection and the risk of public transmission for both sexes.

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