

Warts Among Patients Visited Two Private Dermatology Clinics in Aden, Yemen: A Retrospective, Descriptive Study

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ABSTRACT

Background: Cutaneous warts are benign lesions that occur in the mucosa and skin.

Objectives: To find out the distribution of cutaneous warts related to sex and age, and to determine the occupation of patients, type of cutaneous warts, site, duration from onset of the disease, complication and treatment.

Materials and methods: Two hundred and twelve patients were presented to our clinics in Aden, during the period January 2020 to December 2022 with cutaneous warts. Data including sex, age, occupation, type of warts, site of warts, duration from onset of warts, complications and treatment. Data are presented as mean values with the standard deviation (SD).

Results: The study patients were 118 (55.7%) males and 94 (44.3%) females. The age of the study patients ranged between 4 to 65 years. The mean age of the study patients was 27.3 ± 13.7 years. Most of the patients 68 (32.1%) were of age group 21 – 30 years followed by the age group 31 - 40 years with 48 (22.7%) ($p = 0.000$). Most of occupation of the study patients were laborer (43.4%). Common types of cutaneous warts were predominant (40.6%) ($p = 0.000$). Face was predominant site in (28.3%) patients.

Itching complications found in (25.5%) followed by cosmetic disfigurement (17.9%). Cryotherapy treatments were predominant with (52.8%).

Conclusion: Cutaneous warts occurred in younger patients and located on face, upper and lower extremities, sole, genital site, and neck & axilla. Most treatment was cryotherapy. Further

studies are needed, to identify the epidemiology of these cutaneous diseases in Aden.

Key words: Cutaneous warts, patients, private clinic, Aden, Yemen.

INTRODUCTION

Cutaneous warts are caused by the human papilloma virus (HPV) [1]. While most patients with cutaneous warts are asymptomatic, some may experience physical or psychological discomfort [2]. Many studies have documented the prevalence of cutaneous warts in children [3,4], ranging widely from 3.3% in the USA to 33% in the Netherlands [3]. Data on the prevalence of cutaneous warts in young adults are limited compared with those in children. In an earlier UK study with a modest sample size, the prevalence was reported to be 3.5% in people aged 25 to 34 years and 0.3% in those aged 35 to 54 years [5]. In another earlier US study with a relatively large sample size, the prevalence of wart was 1.2% in people aged 18 to 24 years and 0.6% in those aged 25 to 34 years [6].

Warts are benign lesions that occur in the mucosa and skin. HPV may occur at any site. Cutaneous warts may be transmitted by direct or indirect contact. Events that disrupt the normal epithelial barrier increase the likelihood of developing warts. Treatment may be difficult. Warts often resolve spontaneously within a few

years. Malignant transformation usually is seen in patients with genital warts and immunocompromised patients [7].

The incidence peak in teenage and early adult years with infection rate reaching up to 25% in some studies. Common warts may cause significant concern on the part of the patient as lesions can be uncomfortable, and treatment is often painful and frustratingly ineffective [8]. Occupational meat handlers causing cutaneous injury, softened skin from swimming pool, nail-biting, habitual sucking of fingers, shaving and sexual activities are common modes of transmission [9].

Objectives:

- To find out the distribution of cutaneous warts related to sex and age,
- To determine the occupation of patients, type of cutaneous warts, site, duration from onset of the disease, complication and treatment.

MATERIALS AND METHODS:

Two hundred and twelve patients were presented to our clinics in Almansoor and Khormakser in Aden, Yemen during the period January 2020 to December 2022 with cutaneous warts.

Data including sex, age, occupation, type of warts, site of warts, duration from onset of warts, complications and treatment. Data are

presented as mean values with the standard deviation (SD). The chi-square test was used to test for significance. We used IBM SPSS ver. 22 for statistical analysis. Statistical significance was defined as a P-value of ≤ 0.05 .

RESULTS

During the study period, 212 patients who suffered from skin warts were seen at two private dermatology clinics in Aden.

Table 1 illustrated the demographic variables of the study patients related to sex. The study patients were 118 (55.7%) males and 94 (44.3%) females (Table 1 & Figure 1). The age of the female patients ranged between 4 to 65 years while the age of the male patients ranged between 4 to 58 years. The age of the study patients ranged between 4 to 65 years. The mean age of the study patients was 27.3 ± 13.7 years. Most of the patients 68 (32.1%) were of age group 21 – 30 years followed by the age group 31 - 40 years with 48 (22.7%). The difference between values is statistically significant ($p = 0.000$). In this study, occupations of the study patients were laborer 92 (43.4%), housewives 44 (20.8%), school children 40 (20.8%), high school students 26 (12.2%) and Pre-school children 6 (2.8%). There was statistical relation between occupations of the patients related to sex ($p < 0.05$), (Table 1, Figure 2).

Table 1: Demographic variables of the study patients related to sex (n=212)

Variables	Females n = 94(44.3%)	Males n = 118(55.7%)	Total n = 212(100%)	p-value
Female to male ratio			1:1.26	
Mean age (years):	29 ± 13.3	26 ± 13.9	27.3 ± 13.7	
Age range (years):	4 – 65	4 – 58	4-65	
Age groups:				P = 0.000
≤10	14 (6.6)	24 (11.3)	38 (17.9)	
11-20	2 (0.9)	22 (10.4)	24 (11.3)	
21-30	44 (20.8)	24 (11.3)	68 (32.1)	
31-40	18 (8.5)	30 (14.2)	48 (22.7)	
41-50	10 (4.7)	12 (5.7)	22 (10.4)	
> 50	6 (2.8)	6 (2.8)	12 (5.6)	
Occupations:				P = 0.000
Laborer	28 (13.2)	64 (30.2)	92 (43.4)	
Housewives	44 (20.8)	0 (0.0)	44 (20.8)	
School children	14 (6.6)	30 (14.2)	44 (20.8)	
High school students	6 (2.8)	20 (8.4)	26 (12.2)	
Pre-school children	2 (0.9)	4 (1.9)	6 (2.8)	

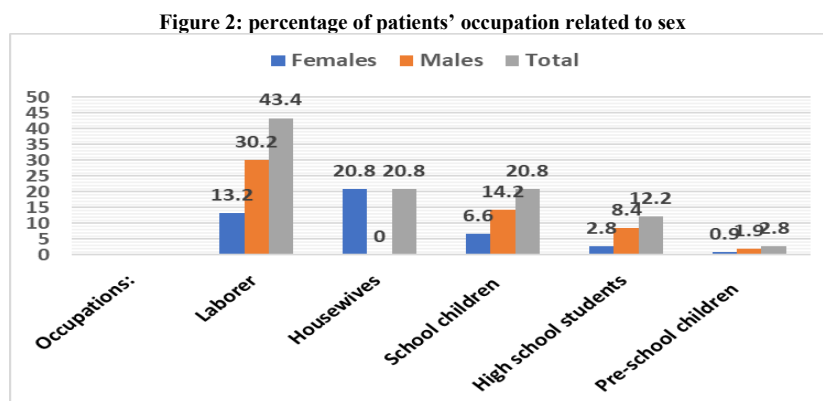
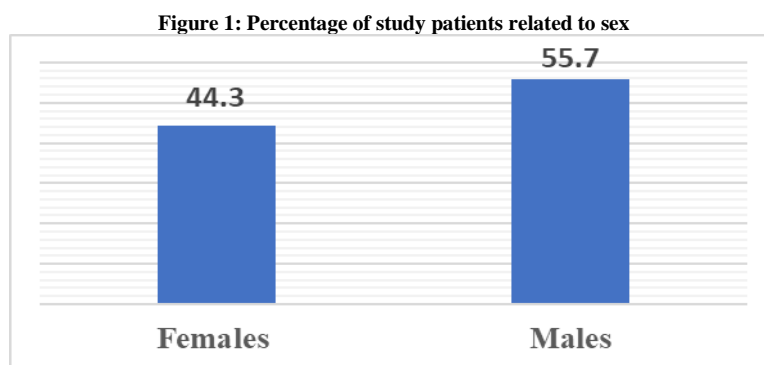


Table 2 and (pictures 1, 2, 3, 4) shows the distribution of the types and the sites of skin warts of the study patients. It revealed that 86 (40.6%) were common types of cutaneous warts followed by plain types 36 (17.0%).

Genital warts are visible warts that occur in the peri-genital and perianal regions found in 32 (15.1%) patients, also, plantar types were in 32 (15.1%). Common and plain types were predominant in female patients in each one 26 (12.3%) while common types were predominant in males with 60 (28.3%). The difference between values was statistically highly significant ($p = 0.000$).

In addition, Table 2 illustrated the site of cutaneous warts. Face was predominant in 40 (18.9%) female patients while in male patients were 20 (9.4%) that means 60 (28.3%) in all patients. Upper extremities found in 45 (21.3%) patients distributed among females with 10 (4.7%) and males with 35 (16.5%). We found sole sites represented 34 (16.0%) while in genital we found 32 (15.1%) and they were distributed 12 (5.7%) in females and 20 (9.4%) in males. Cutaneous warts found in Neck and axilla in 22 (10.4%) patients. We found warts in hand & face 10 (4.7%). In the lower extremities, there were 9 (4.2%).

Table 2: Distribution of variables of the study patients related to sex (n=212)

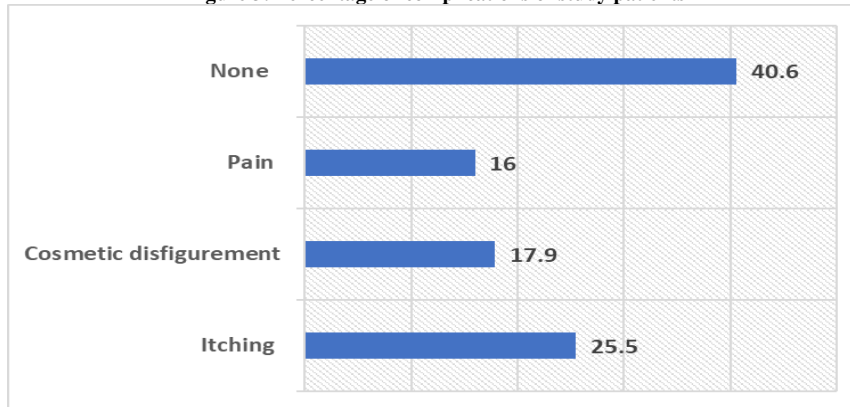
Variables	Females n = 94(44.3%)	Males n = 118(55.7%)	Total n = 212(100%)	p-value
Type of warts:				P = 0.000
Common	26 (12.3)	60 (28.3)	86 (40.6)	
Plain	26 (12.3)	10 (4.7)	36 (17.0)	
Genital	12 (5.7)	20 (9.4)	32 (15.1)	
Plantar	16 (7.5)	16 (7.5)	32 (15.1)	
Filiform	14 (6.6)	12 (5.7)	26 (12.3)	
Site of warts:				P = 0.000
Face	40 (18.9)	20 (9.4)	60 (28.3)	
Upper extremities	10 (4.7)	35 (16.5)	45 (21.3)	
Soles	16 (7.5)	18 (8.5)	34 (16.0)	
Genital	12 (5.7)	20 (9.4)	32 (15.1)	
Neck and axilla	12 (5.7)	10 (4.7)	22 (10.4)	
Hand & face	2 (0.9)	8 (3.8)	10 (4.7)	
Lower extremities	2 (0.9)	7 (3.3)	9 (4.2)	
Mean Duration (months):	16 ±10.5	15.1 ±10.8	15.5 ±10.6	P > 0.05

Table 3 revealed that itching complications were in 54 (25.5%) followed by cosmetic disfigurement in 38 (17.9%), and pain in 34 (16%). Cryotherapy treatments were predominant with 112 (52.8%) followed by electro-surgery 68 (32.1%), retinoid cream 18 (8.5%) and podophyllotoxin cream 14 (6.6%).

Table 3: Frequency of complications and type of treatment (n=212)

Variables	No	%
Complication:		
Itching	54	25.5
Cosmetic disfigurement	38	17.9
Pain	34	16.0
None	86	40.6
Treatment:		
Cryotherapy	112	52.8
Electro-surgery	68	32.1
Retinoid cream	18	8.5
Podophyllotoxin cream	14	6.6

Figure 3: Percentage of complications of study patients



Picture 1: Common warts



Picture 2: Common warts



Picture 3: Plain warts



Picture 4: Extra genital



Picture 5: Filiform warts

DISCUSSION

Viral warts are one of the most common skin problems. Cutaneous warts cause various degrees of physical and emotional discomfort. Periungual warts lead to pain, nail dystrophy and paronychia. Plantar warts induce pain with walking. Warts on exposed areas can be cosmetically unseemly. Warts often resolve spontaneously, especially in children. In particular, warts in adults can be much slower to resolve than warts in children, and are often recalcitrant to treatments. Also, viral warts sometimes need to be distinguished from wart-like lesions such as seborrheic keratosis, epidermodysplasia verruciformis, and verrucous carcinoma [10,11].

In the present study, the study patients were (55.7%) males and (44.3%) females. The age of the female patients ranged between 4 to 65 years while the age of the male patients ranged between 4 to 58 years. The age of the study patients ranged between 4 to 65 years. The mean age of the patients was 27.3 ± 13.7 years. Most of the patients (32.1%) were of age group 21 – 30 years. The difference between values is statistically significant ($p = 0.000$).

Karki et al [12] reported similar to our findings. They found (42.14%) females and (57.86%) males. Overall male to female ratio was 1.37:1 and the mean age was 30.11 ± 13.94 years. Most of the patients (31.42) were of age group 21 – 30 years.

Liu et al [13] reported that in their study found that the prevalence was significantly higher in male students than in female students (2.0% vs. 0.9%).

Shruti [14] mentioned that males (66%) were nearly twice the number of females (34%) in their study, and they added, this gender difference probably due to their increased outdoor activities as well as the increasing trend of cosmetic concern.

Nongenital warts occur in 7% to 10% of the general population, with the incidence peaking between the ages of 12 and 16 years [15]. Viral warts occur equally in both sexes in children ages 2 to 12 years and are among

the three most common dermatoses treated [16,17,18].

Approximately 23% of warts regress spontaneously within 2 months, 30% within 3 months and 65% to 78% within 2 years [19].

In this study, occupations of the study patients were laborer (43.4%), housewives (20.8%), school children (20.8%), high school students (12.2%) and pre-school children (2.8%). There was statistical relation between occupations of the patients related to sex ($p < 0.05$).

A previous study reported that school students (32%) constituted the most commonly affected occupation [14]. Campion [20] has mentioned that warts showed an increase during the school years, peaking within 12–16 years.

Our current study revealed that (40.6%) were common types of cutaneous warts followed by plain types (17.0%).

Genital warts are visible warts that occur in the perigenital and perianal regions found in (15.1%) patients, in addition, plantar types were in (15.1%) patients.

Common and plain types were predominant in female patients in each one (12.3%) while common types were predominant in males with (28.3%). The difference between values was statistically highly significant ($p = 0.000$).

Liu et al [13] reported that of the 215 patients diagnosed with cutaneous warts, 52.1% had common warts; 40.5%, plantar warts; 5.1%, plane warts; 1.7%.

Published studies mentioned that cutaneous warts are benign proliferations of the epidermis and may present in different forms, frequently seen as common warts, plane warts, palmar/plantar warts, or anogenital warts [21,22].

Previous study [14] reported in their published study, similar findings to our results that the prevalence of the clinical types of nongenital warts was common (42%), palmoplantar (20%) and plane (18%).

In our present study, the site of face was predominant in (18.9%) female patients

while in male patients were (9.4%) that means (28.3%) in all patients. Upper extremities found in (21.3%) patients distributed among females with (4.7%) and males with (16.5%). We found sole sites represented (16.0%) while in genital sites we found (15.1%) and they were distributed (5.7%) in females and (9.4%) in males. Cutaneous warts found in Neck and axilla in (10.4%) patients. We found warts in hand & face (4.7%). In the lower extremities, there were (4.2%).

Shruti et al [14] found that limbs (upper, 38%, and lower, 28%) were by far the commonest site of involvement in their study patients. Additionally, face (23%) was the next commonly involved site whereas trunk was affected the least (3%) in their study. They added that frequent involvement of the face is probably attributable to the increased cosmetic procedures like waxing, threading, facials, shaving, and so forth, in the saloons.

Theng et al [23] in their study found 39% cases involving hands and 38% involving feet.

In our current study, itching complication was in (25.5%) followed by cosmetic disfigurement in (17.9%), and pain in (16%) patients.

In the present study, cryotherapy treatments were predominant with (52.8%) followed by electro-surgery (32.1%), retinoid cream (8.5%) and podophyllotoxin cream (6.6%).

Choi et al [24] reported in their published study that in their hospital, warts are usually treated by cryotherapy, although there are other modalities such as laser treatment, topical salicylic acid, and contact immunotherapy using diphenylcyclopropanone.

CONCLUSION

We concluded that cutaneous warts occurred in younger patients (males and females). They located on face, upper and lower extremities, sole, genital sites, and neck & axilla. The treatments were cryotherapy, electro-surgery, retinoid cream, and podophyllotoxin cream. Further studies

are needed, to identify the epidemiology of these cutaneous diseases in Aden.

Declaration by Authors

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Conflict of Interest: The authors declare no conflict of interest.

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