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## CLINICAL CHARACTERISTICS AND THE QUALITY OF LIFE OF PATIENTS WITH GENITAL WARTS

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### ABSTRACT

**Background:** Genital warts are a disease with the highest proportion of sexually transmitted diseases, which are caused by Human Papillomaviruses. Currently, research on the impact on the quality of life of patients with genital warts in Vietnam is still very limited, while this is an issue that deserves attention and has been studied in many places around the world. **Objectives:** To describe the clinical characteristics and evaluate the quality of life of patients with genital warts at Can Tho Dermato-Venereology Hospital in 2023. **Materials and methods:** A cross-sectional descriptive study was conducted at Can Tho City Hospital of Dermato-Venereology, including 111 patients who were diagnosed with genital warts and treated. The generic questionnaire European quality of life index version 5D (EQ-5D), and EQ visual analogue scale (EQ-VAS) have been used to assess the quality of life of patients with genital warts. The period of study is from May 2023 to October 2023. **Results:** Patients in the 14-35 age group accounted for the highest proportion (81.1%), and the over 60-year-old group accounted for the lowest proportion (2.7%). The majority of patients participating in the study were female (61.3%). Types of lesions included sharp papules (78.4%), papular papules (12.6%), keratinized papules (6.3%), and flat papules (2.7%). The mild and moderate disease severity were dominant (79.28%). Genital warts usually do not affect mobility, self-care, or usual activities; however, this disease causes pain or discomfort (59.46%), and anxiety or depression (62.16%). The average general health score according to the EQ-VAS, was  $74.6 \pm 9.031$ . There was a relationship between EQ-VAS and disease severity ( $p < 0.002$ ). The more severe the disease was, the lower the average EQ-VAS score was. **Conclusion:** Genital warts had a negative impact on many aspects of the patient's quality of life, including anxiety or depression, varying from moderate to severe levels. Therefore, in addition to consulting and raising awareness, paying attention to monitoring the problems above is extremely important in treatment. **Keywords:** genital warts, quality of life, EQ-5D, EQ-VAS.

### I. INTRODUCTION

Genital warts accounted for the highest proportion of sexually transmitted diseases (STDs), caused by Human Papillomaviruses. Recent studies show that Human

Papillomavirus infection is often asymptomatic and transient. It is estimated that 30% to 50% of sexually active adults are infected with Human Papillomavirus but only about 1% to 2% of patients have clinical symptoms [1]. Although symptoms are rare, genital warts have a significant impact on the quality of life, from psychology, and sexual life to daily work. Several recent studies have reported that have a significantly negative impacts on quality of life and mental health [2]. According to Segedi L. M. and Bjelica A. (2019), it was found that 81.4% of women expressed anxiety or depression and 50.7% had problems with sex [3]. Recently, a study by Chau Van Tro (2020) showed that 62.5% of male patients had their quality of life and social relationships affected. This also created feelings of confusion and guilt in patients [4]. Currently, domestic research on the impact on the quality of life of patients with genital warts is limited, while this is an issue that deserves attention in many places around the world. For the reasons above, we carried out the project "Clinical characteristics and the quality of life of patients with genital warts" to re-evaluate the clinical characteristics and quality of life of genital warts affected patients.

## II. MATERIALS AND METHODS

### 2.1. Research subjects

All patients were diagnosed with genital warts and treated at Can Tho Dermato-Venereology Hospital from May 2023 to October 2023.

#### Selection criteria

Patients diagnosed with genital warts have symptoms consistent with clinical diagnostic criteria, such as pink, light brown papules and papules that resemble genital warts. The patient agreed to participate in the study.

#### Exclusion criteria

Patients with other STDs: syphilis, gonorrhea, Chlamydia trachomatis, and Herpes simplex. Pregnant patients. Patients presented with signs of severe heart, liver, lung disease, or mental disorders before having genital warts (i.e. anxiety, depression ...).

### 2.2. Research design

A cross-sectional descriptive study. Sampling methods: convenience sampling

Sample size: The sample size is calculated with the following equation

$$n = Z_{1-\alpha/2}^2 \frac{p \times (1-p)}{d^2}$$

In which: n: is the smallest sample size;

$$Z = 95\%; \quad Z_{1-\alpha/2} = 1.96$$

p: is the impactive rate of genital warts on quality of life in terms of anxiety or depression. According to research by Haddad J. (2022), the rate of genital warts causing anxiety or depression in patients is 81.4% [5]. We thereby chose  $p = 0.814$ .

d: is the precision or margin of error allowed in the study, being 0.08.

Thus the actual sample, n, involved 111 patients.

### 2.3. Research contents

Patients were examined by researchers to record the general characteristics of the study subjects (age, gender), and the clinical characteristics of genital warts (reason for examination, lesion type, disease severity). Patients' responses were recorded using the EQ-5D and EQ-VAS. The EQ-5D questionnaire includes five aspects (mobility, self-care, usual activities, pain or discomfort, and anxiety or depression). Participants answered each question by filling in the level of impact on their lives divided into three levels: none, some,

or severe impact [6], [7]. EQ-VAS is a longitudinal general health assessment scale with values ranging from 100 points (good) to 0 points (worst), on which patients mark the score corresponding to their overall health status [8].

#### 2.4. Statistical analysis

Data were analyzed using SPSS 20.0 software. Patients' general and clinical characteristics were described with descriptive statistics. Proportions were compared, using chi-square test ( $\chi^2$ ) with  $p < 0.05$  being statistically significant.

#### 2.5. Ethics approval

All patients signed an informed consent form before participating in the study. Patients had the right to refuse to participate in the study without affecting their quality of the examination and/or treatment. Data collection sheets and files were stored carefully. The study was only for research purposes and posed no harmful effects on participants. Patient information was encrypted and kept confidential.

### III. RESULTS

#### 3.1. Age and gender

Patients in the 14–35 age group accounted for the highest proportion (81.1%), meanwhile the over-60-year-old group accounted for the lowest (2.7%). The majority of patients participating in the study were female (61.3%).

#### 3.2. Lesion type

Table 1. Lesion type

Lesion type	n	%
Sharp papules	87	78.4
Papular papules	14	12.6
Keratinized papules	7	6.3
Flat papules	3	2.7
Total	111	100

Types of lesions included 78.4% sharp papules, 12.6% papular papules, 6.3% keratinized papules, and 2.7% flat papules.

#### 3.3. Disease severity

Table 2. Disease severity

Disease severity	n	%
Mild	38	34.23
Moderate	50	45.05
Severe	23	20.72
Total	111	100

Mild cases accounted for 34.23%, the moderate accounted for the highest rate with 45.05%, and the severe accounted for 20.72% of patients. European Quality of Life 5D version (EQ-5D).

#### 3.4. Degrees of impact on the mobility

Table 3. Degrees of impact on mobility

Mobility	n	%
None impact	95	85.6
Some impact	16	14.4
Total	111	100

In most patients with genital warts (85,6%), their mobility was not affected, while a small proportion (14,4%) experienced minor restriction.

### 3.5. Degrees of impact on self-care

Table 4. Degrees of impact on self-care

Self-care	n	%
None impact	43	50.45
Some impact	51	46.85
Severe impact	17	2.70
Total	111	100

Genital warts did not affect self-care in 50.45% patients. Otherwise, the rates of minor and major impact were 46.85% and 2.70%, respectively.

### 3.6. Degrees of impact on usual activities

Table 5. Degrees of impact on usual activities

Usual activities	n	%
None impact	78	70.3
Some impact	33	29.7
Total	111	100

Genital warts did not affect usual activities in 70.3% patients. The proportion of patients with minor impact was 29.7%. None experienced significant impact on their usual activities.

### 3.7. Levels of pain or discomfort

Table 6. Levels of pain or discomfort

Pain/discomfort	n	%
None impact	45	40.54
Some impact	53	47.75
Severe impact	13	11.71
Total	111	100

The proportion of patients not having pain or discomfort was 40.54%, having little pain or discomfort was 47.75%, and having a lot of pain or discomfort was 11.71%.

### 3.8. Degrees of impact on anxiety or depression

Table 7. Degrees of impact on anxiety or depression

Anxiety or depression	n	%
None impact	42	37.84
Some impact	49	44.14
Severe impact	20	18.02
Total	111	100

In 37.84% of patients, we found no prevalence of anxiety or depression. Others however reported to have some impact of anxiety or depression (44.14%) or to be severely impacted (18.02%).

### 3.9. Average general health score according to the EQ-VAS scale

Table 8. Average general health score according to the EQ-VAS scale

General health	Mean	SD
EQ-VAS	74.6	9.031

The average general health score according to the EQ-VAS was  $74.6 \pm 9.031$ .

### 3.10. The relationship between the average general health score according to the EQ-VAS scale and disease severity

Table 9. The relationship between the average general health score according to the EQ-VAS scale and disease severity

Disease severity	Mean EQ-VAS $\pm$ SD	p= 0.002
Mild	$78.66 \pm 8.41$	

Moderate	72.9 ± 9	
Severe	71.6 ± 7.99	

The average general health score according to EQ-VAS in the mild disease group was 78.66 ± 8.41, the moderate disease group was 72.9 ± 9, and the severe disease group was 71.6 ± 7.99. The average scores between groups was significantly different (p =0.002).

#### IV. DISCUSSIONS

##### 4.1. Age and gender

Our study found that the age group of 14-35 years accounted for the majority of patients with genital warts (81.1%), meanwhile, the age group over 60 years old was the least (2.7%). These proportions were similar to those reported by Lac Thi Kim Ngan (2020), with 71.8% and 2.4%, respectively [9]. The study by Ha Nguyen Phuong Anh (2015) also found that the young age group (20-29 years) were dominant (84.54%) [10]. This can be explained by the high sexual desire and frequent intercourses of this age group, who are mostly single or have unstable marriages. This leads to the fact that people of this age group have many sexual partners, and thus an increased risk of getting the disease.

Females constituted the majority (61.3%) of our study population. This result is similar to previous studies by Lac Thi Kim Ngan (2020) with a the proportion of female patients being 67.1% [9] and by Ha Nguyen Phuong Anh (2015) with a proportion of 52.5% [10]. In contrast, Nguyen Van Thuong (2017) found that the rate of genital warts was high in both men and women [8]. This may be explained by the fact that women care about their health and come for the examination and treatment earlier than men.

##### 4.2. Lesion types

According to our research, 78.4% of the lesions were sharp warts, 12.6% were papular warts, 6.3% were keratinized warts, and 2.7% were flat warts. Our results are similar to those of Lac Thi Kim Ngan (2020) that the sharp and papular lesions were the most commo, 89.4% and 22.4%, respectively [9]. According to Bui Thi Thuy Dung (2018), the lesions were warty (87%), while the remaining papules accounted for 13% of patients, and there were no flat lesions [11].

##### 4.3. Disease severity

Our research found that the severity of the disease was mild (34.23%), moderate (45.05%), and severe (20.72%). According to research by Haddad J. (2022), the respective values were 24.51%, 32.35%, and 43.13% [5]. In our study, the majority of patients had mild and moderate symptoms, meanwhile the proportion with severe symptoms was lower. This is quite reasonable because the level of concern for the disease is increasing, patients come to the doctor ealier and have multiple follow-up visits that the disease is often treated early at milder state.

##### 4.4. Degrees of impact on the mobility

The proportion with no impact on mobility was 85.6%, and little impact was 14.4%. None was affected with a great extent. This result is similar to Haddad J. 's (2022) study, 86.3% had no impact on mobility, 13.7% had some, and no one had much limitations in mobility [5]. With the development of information technology, patients with genital warts are often detected early and treated promptly, so the severity of the disease is often milder, leading to less impact on the patient's mobility.

#### **4.5. Degrees of impact on self-care**

The proportions of patients with self-care not being affected were 50.45%, slightly affected 46.85%, and greatly affected 2.70%. Our results closely resemble those reported by Haddad J. (2022) who found, the respective values being 87.2%, 11.8%, and 1% [5]. Self-care is often unaffected or slightly affected. However, the degree of impact may still exist in some cases of severe disease, such as genital warts that are large and multiple, or in locations that are difficult to clean such as the anus and vagina.

#### **4.6. Degrees of impact on usual activities**

The proportion of patients of whom usual activities were not affected was 70.3%, while 29.7% reported a slight impact. No one is much affected by usual activities. Our results are similar to those of Haddad J. (2022) that, the proportion not affected in usual activities was 89.2%, and no one had limitations in usual activities [5]. This may be explained by the fact that functional symptoms are often absent or rare, so this does usually not affect usual activities.

#### **4.7. Levels of pain or discomfort**

The proportion of patients with no pain or discomfort was 40.54%, little pain or discomfort was 47.75%, and with a lot of pain or discomfort was 11.71%. Our study has similar results to previous studies. According to Haddad J. (2022), the respective values were 48%, 31.4%, and 20.6% [5]. According to Shi JF (2012), the proportion of patients who had some problems causing pain or discomfort was 24.7% [6]. This could be explained by the fact that genital warts usually cause little pain or discomfort.

#### **4.8. Levels of anxiety or depression**

The proportion of patients with no anxiety or depression was 19.82%, meanwhile 45.05% patients had little anxiety or depression, and 35.14% had much anxiety or depression. The results of our study are similar to those of domestic and foreign studies. For instance, Haddad J. (2022) found that the proportion with little anxiety or depression was 25.4%, and with severe depression was 56% [5]. Similarly, Shi JF (2012) reported that the proportion of patients with some problems was 56.4% [6]. From the aforementioned results, genital warts have a significant impact on psychology, increasing the risk of anxiety and depression in affected patients. However, our study and others could not exclude the impact of other life problems in modern society that increase the risk of anxiety and depression as well.

#### **4.9. Average general health score according to the EQ-VAS scale**

In our study, the average general health score, measured by the EQVAS, was  $74.6 \pm 9.031$ . According to Shi JF (2012), the value was  $65.2 \pm 22.0$  [6]. Overall, we reported a higher health score than that of Shi's study, thus reflecting a smaller impact of genital warts on mobility, self-care, daily activities, and pain or discomfort. Otherwise, anxiety or depression was mainly prevalent in patients with genital warts.

#### **4.10. The relationship between the average general health score according to the EQ-VAS scale and disease severity**

In our study, the average general health score in the mild disease group was  $78.66 \pm 8.41$ , in the moderate disease group was  $72.9 \pm 9$ , and the severe disease group was  $71.6 \pm 7.99$ . These values were significantly difference between the groups ( $p=0.002$ ). Our results were similar to those of Shi JF (2012), that the average EQ-VAS score in the group with single or few lesions was  $68 \pm 21.2$ , the group with multiple lesions was  $64.2 \pm 22.2$ . The difference

between these groups is statistically significant with  $p < 0.001$  [6]. The more severe the disease, the lower the average EQ-VAS score.

## V. CONCLUSION

Genital warts have a negative impact on many aspects of the patient's quality of life, including anxiety/depression, ranging from moderate to severe levels of impact. Therefore, in addition to consulting and raising awareness, paying attention to monitoring the quality of life of patients is extremely important in treatment.

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