

Sexually Transmitted Viral Infections Involving the Genitalia among Females in Nassirya; a Clinical & Histopathological Study

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ABSTRACT

Background: Sexually transmitted infections (STIs) caused by viruses, are among the most prevalent infectious diseases worldwide and a major cause of morbidity and mortality, better understanding of these diseases may be critical for their prevention.

Objective: To shed light on the main sexually acquired viral infections in women in Nasiriya city.

Method: A cross sectional study was done in the period from April 2016 till April 2017, females of all ages attending the outpatient dermatology department in Al Hussain teaching hospital in Nasiriya; south of Iraq; having dermatoses in the genital area that were diagnosed to be viral infections were included in the study.

Results: A total of 260 female patients from all ages were seen & examined during the study period, the highest number (131) was among patients with molluscum contagiosum; among whom there were 28 baby girls with uncertain sexual mode of transmission, followed by genital warts (108) & the least were patients with herpes simplex (21).

Conclusion: viral STI's in women are important yet neglected diseases as most patients feel shy & postpone medical consultation, leading to delayed diagnosis & in many instances grave consequences.

Keywords: *female, genital, infective, sexually transmitted infections (STIs).*

INTRODUCTION

Sexually transmitted infections (STIs) are a major global cause of acute illness and infertility, with severe medical and psychological consequences for millions of men, women and infants. ⁽¹⁾ Genital dermatoses are very common, but usually under diagnosed because of the embarrassment associated with it, many women were brought up with the prevailing cultural taboos about the female genitalia and are members of the “down there” generation where almost no words are spoken to refer to the female genitalia, internal or external. ⁽²⁾

The burden of STIs rests predominantly with the youth of society. ^(3,4,5) The majority of young women initiate sexual activity during adolescence, ⁽⁶⁾ and the risk for sexually transmitted infections (STIs) accompanies this initiation. ⁽³⁾

Sexually transmitted diseases (STDs) have long been known to cause acute pathological syndromes, such as genital secretion and ulceration. However, they only recently have come to be considered significant causes of long-term morbidity, this is principally due to the large amount of information that has been collected about a group of agents that cause these diseases: the viruses. ⁽⁷⁾ After the association between virus and ano-genital cancer was established, viral STDs began to be recognized as important diseases that influence the health of women and breastfeeding infants, as well as

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reproductive health. ⁽⁸⁾

In Iraq, in spite of the conservative nature of the society, & the prevailing rule of no sex before marriage; the tendency towards early marriage exposes adolescent females to the same consequences of early exposure to sex & increasing number of STI's mainly viral seen daily in medical practice, & since these carry long-term health consequences, some of which are serious and life threatening, this study was designed to focus on the main risk factors & modes of transmission for better understanding & prevention of these diseases.

Patients & methods: A prospective cross sectional study was done, the patients included were females of all ages who were diagnosed to have viral infections involving the genital area.

Patients were seen & examined during the period from 1st April 2016 till 1st April 2017. A careful detailed history was taken from all patients, regarding age, marital status, pregnancy, their chief complaint, its duration, menstrual, obstetric & contraception history, history of sexual exposure & partner affection, personal or family history of diabetes or any systemic illness or skin disorders as atopy or psoriasis & a detailed drug history of the type of treatment used & whether this treatment has led to improvement or worsening of the condition.

A thorough physical examination of affected skin was done, together with examination for lesions elsewhere in the body. Clinical diagnosis was enough most of the time, still some patients needed further investigations like mycological (KOH mount), bacterial (Gram's stain & culture), hematological, serological, biochemical tests, & biopsy in selected cases.

Patients without visible skin lesions were excluded from the study (hepatitis ABC, & HIV).

A verbal consent was taken from all patients included in the study, together with a written consent from patients whose photographs were included in the study.

RESULTS

Two hundred sixty female patients were seen & examined during the study period, of (31.64) years mean age ± 14.238 SD.

Table one shows that molluscum contagiosum was the highest proportionally estimated disease among studied population (50.4%) followed by genital warts (41.5 %)

Table (1): the prevalence of viral infection in the study population

Dermatosis	Number	Frequency
Genital warts	108	41.5%
Molluscum Contagiosum	131	50.4%
Herpes simplex	21	8.1%
Total	260	100%

Figure one shows a very high significant statistical association between the durations of the different infections that were transmitted sexually before seeking medical advice and its occurrence, where F. E=308, P value= 0.0001

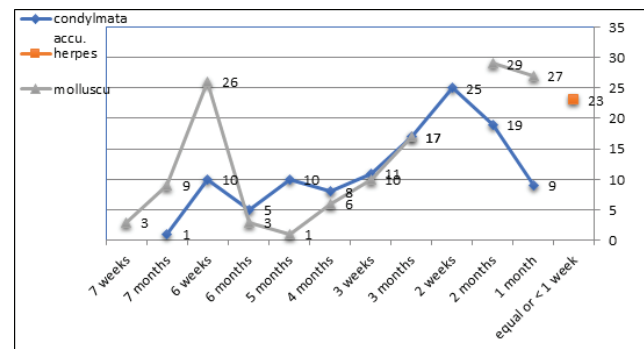


Figure 1: the duration of the viral STIs before seeking medical advice

Table two shows the main characteristics of the patients in the study, like the age range; where the highest prevalence (28.2%) was among the 20-29 years' age group, & nearly half of the reported cases were less than 30 years old.

Regarding the marital status, except for baby girls, there was a very high significant statistical association between the marital status and the diagnosis, as the majority (78.2%) were married women & the P value was higher than 0.05.

No significant statistical association was found between pregnancy & the risk of viral STIs, the same was true for contraception use where the P value was less than 0.05 for both.

Nearly equal prevalence was found for both married women whose partner was affected (51.7%) & those whose partner was not (48.3%).

The majority of the patients (83.8%) were healthy with only 10% had associated diabetes.

Table 2: Distribution according to patient's characters.

Variables		Total	X2	P
Age /yrs	STD			
	<10 years	28, 10.82%	28	28.394
	10-19 years	32, 12.3%	48	0.0001
	20-29 years	73, 28.2%	128	
	30-39 years	43, 16.6%	81	
	40-49 years	53, 20.5%	75	
	50-59 years	23, 8.5%	30	
	60& or more	8, 3.1 %	17	
	Marital status			
Baby girls		28, 10.82%	27	50.021
divorced		4, 1.7%	8	0.0001
Not married		23, 8.5%	71	
Widow		2, 0.78%	2	
Married		203, 78.2%	299	
Total		260		
Pregnancy				
Not		182, 89.7%	372	0.250 ^a
Pregnant		21, 10.3%	35	0.617
Total		203		
Contraception use				
No		165, 81.3%		
Yes		38, 18.7%	65	
Total		203	40	
Partner affection				
Yes				
No		105, 51.7%		
Total		98, 48.3%		
		203		
Co-morbid conditions				
Diabetes				
Anemia		26,10%		
Hypertension		10, 3.9%		
Nothing		6, 2.3%		
total		218, 83.8%		
		260		



Figure 2 : Condylomata accuminata



Figure 3 : Four weeks after treatment with topical 5% imiquimod cream

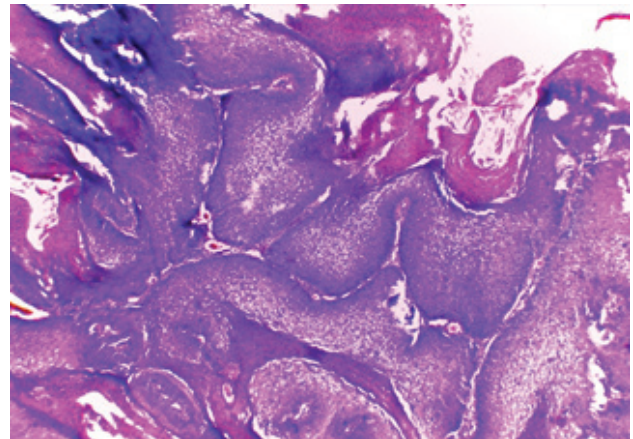


Figure 5: histopathological examination of Conyломata accuminata



Figure 4: Molluscum contagiosum

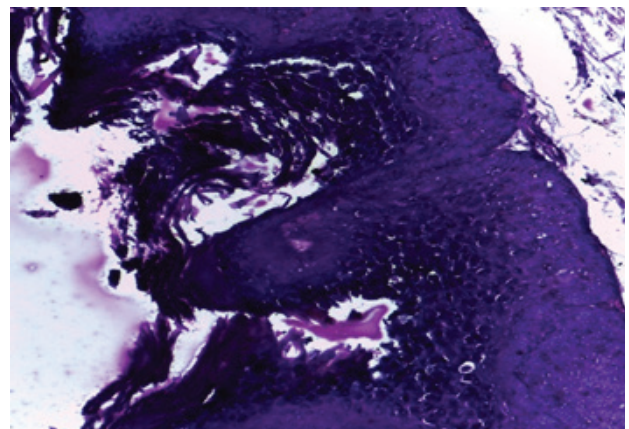


Figure 6: histopathological examination of Molluscum contagiosum

DISCUSSION

Sexually transmitted infections (STIs) caused by viruses, are among the most prevalent infectious diseases worldwide and a major cause of morbidity and mortality. ⁽⁹⁾ They are preventable, but unlike bacterial STIs the person may harbor the virus in her or his body

for life with periodic recurrences of active infection ⁽¹⁰⁾

Women have a higher prevalence rates of STIs than men ⁽¹¹⁾, it is estimated that females are three times more likely to be diagnosed with a new STI, ⁽¹²⁾ that is why it is important to understand the gender-specific differences in STIs in order to develop preventive strategies for these diseases.

Most of the patients 131(50.4%) in the present study; had molluscum contagiosum(MC), but if we exclude the number of baby girls (28) with uncertain sexual mode of transmission, then the actual number would be 103(39.6%), genital warts constituted (41.5%), & herpes genitalis (8.1%), in the literature; genital warts (condylomata accuminata) are still the commonest STI, ⁽¹³⁾ also in Ireland they accounted for 34.1% of STIs reported in 2005.⁽¹⁴⁾ while other reports claim that herpes genitalis is the most common STI in the world, ⁽²⁾

We did not come across any report of molluscum contagiosum being the commonest STI, this higher prevalence might be explained by the higher prevalence of molluscum contagiosum in general in our society, a cross-sectional study in Iraq showed that MC virus infection represents (8.9%) from all dermatological patients who visited Al-kindy Teaching Hospital over the six months' study period.

Also, 52.5 % of dermatological infections were MC, it was high percentage in comparison to other dermatological infectious disease ⁽¹⁵⁾. This increase in MC infection may be explained by overcrowding and large Iraqi families; a lot of people were grouped together during social and religious events using same towels and beds, which can encourage spreading the virus by direct skin to skin contact ⁽¹⁶⁾, as the virus is reported to be more common in warm countries with a high population density. ⁽¹³⁾

The lower presentation of herpes genitalis in the study might be due to the fact that most recurrent episodes of herpes simplex genitalis are either asymptomatic or have mild symptoms ⁽¹⁷⁾ which does not necessitate medical consultation.

There was a very high significant association between the duration of the illness before consultation; 72.5% of patients with Molluscum contagiosum sought medical advice in less than 2 months' duration, compared to 66.6% of patients with condylomata accuminata,

while all patients 100% with herpes genitalis presented with 1 week or less history, this might be attributed to the severe pain & dysuria accompanying this condition ^(18,19) on the contrary to the asymptomatic behavior of both molluscum contagiosum & condylomata accuminata.

Delays between the onset of symptoms and reaching a definitive diagnosis of problems involving the genital area were reported in the literature to be between 18 months to 10 years, ⁽²⁰⁾ due to facts related to embarrassment or fear of a grave diagnosis as genital skin symptoms often trigger concerns of poor hygiene, sexually transmitted infections, or undiagnosed cancer. ⁽²¹⁾

This earlier reporting to health care in this study might be explained by the fact that most of the patients were married with an easier access to health care providers, adding to the presence of almost free health services to women in antenatal clinics.

More than 40% of the patients were less than 30 years of age (excluding the 10.8% baby girls), with 12.3% adolescents, this is not at variance with the literature, in Ireland, the burden of STIs rests predominantly with the youth of society & approximately 50% of new diagnoses are in young people under the age of 25 years ⁽¹²⁾, another study in 2010 showed that almost 75% of STI diagnoses occurred in individuals aged less than 29 years and 12.7% were in those aged less than 19 years,⁽²²⁾ in USA the adolescents represent at least one-quarter of individuals infected with STIs while two-thirds of STIs occur in those aged under 25 years,⁽³⁾ The situation is similar in Australia, where over 25% of chlamydia infections in 2011 were in those aged less than 20 years ⁽²³⁾.

This resemblance in the results despite the big difference in the social behavior between the societies might be related to the earlier age of marriage in the population of the study as pre-marriage sex is not practiced.

Excluding the children in the study, 78.2% of the patients were currently married, table (2), this is a very significant association with P value more than 0.05, & is in accordance with the literature of the increased ratio of STIs with sex exposure ^(24,25,26) which in the patients included in the study coincides with marriage.

On the contrary, there was no significant association with pregnancy or the use of contraception, with P value

less than 0.05.

Children constituted (10.82%) of the patients with genital & perianal lesions of MC, they are unlikely to be sexually transmitted as reports have confirmed that genital and perianal lesion can develop in children and are rarely associated with sexually transmission in this population. (27,28)

No significant difference was found between married women whose partners were affected (51.7%), or not (48.3%), a lot of reports in the literature focus on the relation between the age of the sexual partner & the acquisition of STI, adolescent girls with older male partners are at increased risk of sexually transmitted infection, the importance of this association in young adults is unclear. (29) Having multiple partners on the other hand was positively associated with a diagnosis of bacterial infection but not viral infection. (30)

The majority of the patients (83.8%) were otherwise healthy, only a minority had hypertension, anemia & diabetes,

Smoking, alcohol and drug are regarded as markers of risk-taking behavior for STIs; (30) were all negative due to the conservative nature of the society.

CONCLUSION

Sexually transmitted infections (STIs) are a major public health problem, especially in developing countries, viral STIs are on a rise. Being non-curable, prevention and early diagnosis are key tools to prevent their grave consequences, sequelae & complications. Future research and public health preventive efforts are needed especially in women; the main victim of these diseases.

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Conflict of Interest - None.

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Factors Associated to Infant Vaccination in Madurese, Indonesia

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ABSTRACT

In Madura, a lot of infants have incomplete immunization status in which one of the areas with low immunization coverage is Burneh sub-district. The coverage of complete basic immunization in Burneh only 64% in 2015. The aim of this study was to analyze factors related to vaccination in Madurese, using cross sectional design. The sample were 97 mothers with babies 0-1 years old in Burneh sub-district. Data were collected using questionnaires, then analyzed using Chi square test. The results showed the correlation between knowledge ($p = 0.027$), confidence ($p = 0.000$), attitude ($p = 0.003$), culture ($p = 0.000$), access to health care ($p = 0.013$), family support ($p = 0.034$), and support of health professionals ($p = 0.021$) with the basic immunization status. Meanwhile, the support of community leaders ($p = 0.054$) had no correlation with the basic immunization status.

Keywords: *Culture, Family support, Immunization, Knowledge, Madurese, Confidence, Attitude, Access to health care*

INTRODUCTION

Immunization is an induction of immunity in infants and children to protect them from various diseases so that they grow up healthy⁽¹⁾. In Madura, many infants did not receive complete basic immunization which was proved by the high cases of diphtheria in Bangkalan, Madura. According to the Regent of Bangkalan, there are three villages in sub-districts of Blega, Tanah Merah and Burneh defined as areas with extraordinary occurrence of diphtheria⁽²⁾. Head of Public Health Office of Bangkalan explained that according to data compiled by Madura Terkini, the infant mortality rate has risen in 2015 as many as 154 cases. This number is greater than in 2014 with 112 cases⁽²⁾.

According to preliminary study conducted by researchers on March 2016 at the Public Health Office of Bangkalan, the total infant in the Public Health Center (PHC) of Burneh region was 980, while the number of

infants who have received complete basic immunization only 627. So there is only 64% infants in Burneh who were completely immunized.

Basic immunization rate in Burneh district from 2012 to 2015 has been uncertainly up and down. In 2012, the coverage of basic immunization was 60.8%. This rate declined into 58.4% in 2013. However, in 2014, the coverage increased to 68.2% which then recurrently declined to 64% in 2015.

Madura is well-known as a society which strictly upholds the cultural norms. Madurese people still believe in the statement or doctrine of the ancestors from antiquity. The people also believe in assumption that the healthy children without any disease should not be brought to health care service to get injection or other treatments. Local health professionals has been actually conducting basic counseling about immunization to mothers who have babies in Burneh district, but somehow the immunization coverage is still below the target of 100%. Many factors affect the low coverage of immunization in infants. Based on the theory of Green (1991), the behavior of an individual as well as society is affected by three factors: predisposing factor, enabling factor, and reinforcing factor⁽³⁾.

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