

Pattern of Penile dermatoses: an observational study at tertiary level hospitals, Dhaka, Bangladesh

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ABSTRACT

Background: Penile lesions are always a cause for intense concern and embarrassment for the patients, who may therefore delay seeking medical attention. Sexually transmitted infections, represent a major global health problem leading to morbidity, mortality and stigma. Non-venereal dermatoses tend to be confused with venereal diseases, which may be responsible for mental distress and guilt feelings in patients. So, physician and other health professional related to these condition should have proper knowledge, so that they can diagnose the disease promptly and manage properly.

Objective: To study the pattern of penile dermatoses.

Methodology: This was an observational cross sectional study which was conducted in the Department of Dermatology & Venereology of Shaheed Suhrawardy Medical College hospital and Bangabandhu Sheik Mujib Medical University in Dhaka city of Bangladesh during the period of July 2010 to June 2012. The patients having penile dermatoses diagnosed clinically and confirmed by relevant investigations were included.

Results: A total of 503 patients having penile lesion only were enrolled in this study. Skin infections were the most common dermatoses (363 patients, 72.15%) followed by papulosquamous (33 patients, 6.54%), dermatitis (29 patients, 5.76%), pearly penile disease (19 patients, 3.77%), drug reaction (16 patients, 3.16%), Peyronie's disease (13 patients, 2.58%), vitiligo (11 patients, 2.18%) and neoplasms (10 patients, 1.98%).

Conclusion: A few of the penile dermatoses are sexually transmitted infections (STIs). Control of sexually transmitted infections should be given priority, because they may be related to HIV transmission. Although many of the penile dermatoses are benign, some of them may lead to long term sequelae, infertility and malignancy.

KEY WORDS: Penile dermatoses, pattern

INTRODUCTION

Penile dermatoses may be a manifestation of general disease or specific alterations of the genital region. Medical history, thorough examination of the whole integumentary system and relevant investigations will be needed to reach the correct diagnosis.¹

There is wide variation in the pattern of penile dermatoses reported from different parts of the world, even in same country due to factors such as genetic constitution, hygiene standards, cli-

mate, customs, sexual behavior, religion, socioeconomic condition, occupations, and quality and quantity of medical care.²

Dermatoses of the penis may be venereal and non-venereal. However, penile dermatoses are not strictly classified. They include infective (bacterial, viral, fungal, parasitic), inflammatory (psoriasis, lichen planus, lichen sclerosus, seborrheic dermatitis), autoimmune (vitiligo), multisystem diseases (Behcet Syndrome, Reiter's Syndrome, Crohn disease), exogenous (contact dermatitis,

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corticosteroid abuse, fixed drug eruption, Steven Johnson Syndrome) and benign and malignant neoplasm and others.^{1,2}

Sometimes there leads to confusion between venereal and non-venereal dermatoses which cause mental distress and guilt feelings to the patients.³ Patient usually attends the physician only if there is complain, eg. itching, pain, and soreness or affect sexual intercourse. Along with these there is lack of diagnostic facilities which further complicate the dermatoses.¹

Although the literature is saturated with the pattern of overall skin diseases, no formal study has been done on the overall occurrence of penile dermatoses, hence we undertook this study to find out the pattern of penile dermatoses at a tertiary care centre in Dhaka.³

MATERIALS & METHODS

This was a cross-sectional observational study spanning a period of two years from July 2010 to June 2012. All male patients attending in the Department of Dermatology & Venereology, Shaheed Suhrawardy Medical college hospital (ShSMCH) and Bangbandhu Sheikh Mujib Medical University (BSMMU) at Dhaka city in Bangladesh were screened for penile dermatoses and irrespective of their age presented with penile lesion were included in the study.

Informed consent was obtained. A detailed history including demographic data, chief complaints related to penile skin; presence of itching, pain, skin lesion, onset, associated medical or skin disorders was elicited and recorded. Enquiry was made with regard to history of sexual exposure, personal and genital hygiene and presence or absence of circumcision.

The penile area was examined and findings were

noted. A detailed physical examination was made to see any associated lesions elsewhere in the body. Investigations such as microbiological, serological, histopathological etc. were done when required to confirm the diagnosis. Patients were assured to maintaining strict privacy and secrecy of information.

After collection of datas, they were screened by checking consistency, edited and were finally analyzed by software Statistical Package for Social Science (SPSS) method.

RESULTS

Total of 503 patients having penile dermatoses attended the Department of Dermatology & Venereology, Shaheed Suhrawardy Medical college hospital (ShSMCH) and Bangabandhu Sheikh Mujib Medical University (BSMMU) at Dhaka in Bangladesh during the study period of two years from July 2010 to June 2012.

The various dermatoses shown according to systematic way, frequency, age, occupation, distribution in Table 1, 2, 3 and 4.

Table 1 Pattern of Penile dermatoses (n=503)

Dermatoses	No. of patient	Percentage
1. Infections:		
Parasitic	149	29.62
Bacterial	104	20.67
Viral	92	18.29
Fungal	18	3.57
Total	363	72.15
2. Papulosquamous:		
Psoriasis	15	2.98
Lichen planus	9	1.78
Lichen sclerosus	7	1.39
Lichen nitidus	2	0.39
Total	33	6.54
3. Contact dermatitis	29	5.76

4. Drug Reaction		
Steven Johnson Syndrome	4	0.79
Fixed Drug Eruption	10	1.98
Erythema Multiforme	2	0.39
5. Autoimmune		
Pemphigus vegetens	2	0.39
6. Neoplasm		
Epidermal cyst	6	1.19
SCC	4	0.79
7. Vascular		
Scleroging Lymphangitis	5	0.99
8. Others		
Pyronies disease	13	2.58
Vitiligo	11	2.18
Pearly Penile papule	19	3.77
Angioedema	2	0.39
Total	503	100.0

Table 2 Distribution of attending patients according to frequency of dermatoses (n=503)

Dermatoses	Frequency	Percentage
Parasitic	149	29.62
Bacteria	104	20.67
Viral	92	18.29
Contact dermatitis	29	5.76
Pearly Penile papule	19	3.77
Fungal	18	3.57
Psoriasis	15	2.98
Pyronies disease	13	2.58
Vitiligo	11	2.18
Fixed drug eruption	10	1.98
Lichen planus	9	1.78
Lichen sclerosus	7	1.39
Epidermal cyst	6	1.19
Sclerosing Lymphangitis	5	.99
Steven johnsons syndrome	4	.79
SCC	4	.79
Lichen nitidus	2	.39
Erythema multiforme	2	.39
Pemphigus vegetens	2	.39
Angioedema	2	.39
Total	100	99.89

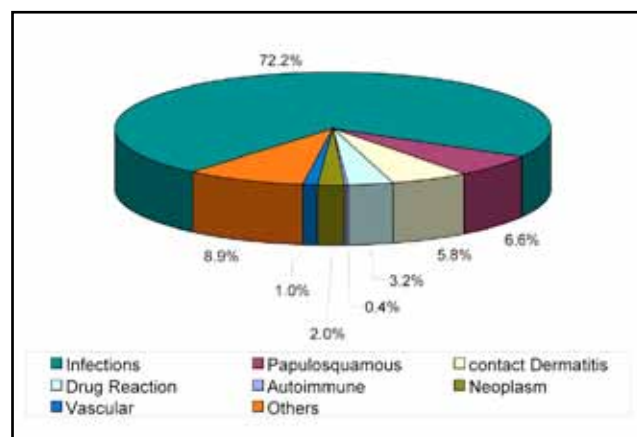


Fig. 1 Pie chart of pattern of Penile dermatoses.

Skin infections were the most common cause 363 (72.15%), followed by papulosquamous 33 (6.54%), dermatitis 29 (5.76%), pearly penile papule 19 (3.77%), drug reaction 16 (3.16%), peyronies disease 13 (2.58%), vitiligo 11 (2.18%), neoplasm 10 (1.98%).

In infectious group, parasitic infections were the common 149 (29.62%), followed by bacterial 104 (20.67%), viral 92 (18.29%) and fungal 18 (3.57%).

The age of patient ranged from one year to above 60 years. Most patients belonged to the age group 16-40 years (207 patients, 41.15%), followed by 41-60 years (161 patients, 32%), 1-15 years (102 patients, 20.27%), above 60 years (33 patients, 6.56%). In all groups infections were the most common dermatoses. The majority of patients were workers (daily labour, garments worker, night guard, industrial labour, construction worker etc), 129 patients 25.64%, followed by student from primary to higher education (101 patients, 20.07%), Service holder (official staff of government & non-government, (87 patients 17.29%), driver of all types of vehical like bus driver, truck driver, rickshaw puller, van puller etc, (81patients, 16.10%), businessmen of all types (68 patients, 13.5%) and others (37 patients, 7.35%). In all oc-

Table 3 Distribution of penile dermatoses according to age

Age	Bacteria	Parasite	Viral	Fungal	Papulo squamous	Derma titis	Drug reaction	Neo plastic	Vascular	Auto immune	others
0-15years	1	51	21	13	2	2	4	0	0	0	8
16-40 years	61	47	42	1	9	11	6	2	3	1	24
41-60 years	37	44	27	2	18	13	5	3	2	1	9
>60 years	5	7	2	2	4	3	1	5	0	0	4
Total	104	149	92	18	33	29	16	10	5	2	45

Table 4 Distribution of penile dermatoses according to occupation

Occupation	Bacteria	viral	Parasite	Fungal	Papulo squamous	Derma titis	Drug reaction	Neo plastic	Vascular	Auto immune	Others
Driver	21	17	23	0	3	6	3	1	0	0	7
Worker	29	25	33	0	6	11	5	2	1	0	17
Student	21	23	37	3	5	5	2	1	1	0	3
Service	19	17	32	2	2	2	2	2	1	0	8
Business	9	7	17	9	8	4	3	2	2	0	7
Others	5	3	7	4	9	1	1	2	0	2	3
Total	104	92	149	18	33	29	16	10	5	2	45

occupational group infections were the most common dermatoses.

Some patients also had other sites of body involvement particularly patients with psoriasis, lichen planus, lichen nitidus, scabies, molluscum contagiosum, viral wart, drug reaction and vitiligo.

Diabetes mellitus was present in two patients of fungal disease. Uncircumscribed patients were associated with candidiasis, dermatitis and phimosi.

DISCUSSION

Penile dermatoses include a spectrum of diseases with varied etiology. These diseases may cause severe psychological trauma and fear in mind of patients. So it is necessary to diagnose and manage these dermatoses in the patient to get relief from this mental agony. There are no comprehensive studies on the pattern of penile dermatoses from a developing country like us. The most com-

mon dermatoses observed in our study was infectious groups (Total 363 patients, 72.15%) eg. parasitic 149 patients, 29.62%; bacterial 104 patients, 20.67%; viral 92 patients, 18.29% and fungal, 18 patients, 3.57%; followed by papulosquamous (33 patients, 6.54%), followed by dermatitis (29 patients, 5.76%) then drug reaction (16 patients, 3.16%).

In Shahram et al⁴. study, infectious and parasitic diseases accounted 25.8% of all consultation; scabies was frequent in that region. Our study reveals 29.62% of parasitic diseases. This difference may be due to many factors including environmental, socio-economic factors, genetic, lack of medical facilities etc.

Our study reveals bacterial infections to be 20.67% (syphilis, gonorrhoea, chancroid, LGV). Prevalence of syphilis 29.5% in Muhammad Arif Maan et al⁵ study, 32.4% in Basal et al⁶ study, 31.6% in Rehan study.⁷ Syphilis infection has

reached alarming rates (13.8%-19.5%) in China⁸. Prevalence of gonorrhoea 13% in Muhammad Arif Maan et al⁵ study, 27.5 % in Rehan study⁷. A 31.5% prevalence of gonorrhoea was observed among the patients attending hospital in Farwaniya, Kuwait,⁹ 85% in Cape town, 71% in Johannesburg, South Africa,¹⁰ 35% in Karnataka state, India.¹¹ In contrast, miners in Yunnan, China had 0.8% prevalence of gonorrhoea.¹² Greenland reported 1.74%, Northern Canada reported 0.25% and United States reported 0.43%.¹³

Genital herpes simplex virus is an increasingly important cause of genital ulcer disease.¹⁴ Our study revealed prevalence of viral disease was 18.29% (consisting of herpes simplex virus infection, herpes zoster, HPV infection and molluscum virus infection). The overall HSV-2 seroprevalence in the United States was 21% in 1988-1994, 17% in 1999-2004, and 16.2% in 2005-2008.¹⁵

HSV -2 was identified in 85.2% of STI clinic attendees in Delhi, India.¹⁶ In the 1997-1998 German national health survey, the seroprevalence of HSV-2 was 13.3% in Germany, 16.5% in the former East Germany, 12.6% in the former West Germany.¹⁷ The prevalence of HSV-2 was 9.6% among minors in China¹² and was estimated at 15% in Chennai, India.¹⁸

Prevalence of virologically detectable subclinical or latent infections may be as high as 30-50%.¹⁹ The prevalence of HPV DNA in healthy men is estimated to be 5%, with a peak of 8-11% occurring at 16-35 years of age.^{19,20}

There is little literature about the incidence and distribution of other penile dermatological diseases.

There was lack of knowledge, misconceptions in beliefs and attitude, poor personal and sexual hygiene, overcrowding in living and working env

ironment, poor sanitary condition in living and working environment of our attending patients. Health service facilities in the working area are also poor which need to be modified to ensure early diagnosis and treatment. Modern diagnostic techniques are not widely developed and little standardization of medical arrangements. People also sometimes contact pharmacies or traditional healer's, homeopathic doctors instead of health care facilities and self medications or alternative therapies worsen the diseases.

Our working environment was Shaheed Suhrawardy Medical College & Hospital, which is the only tertiary care hospital in that arena. The catchment area of this hospital is large. Huge garments factories, day labour of various classes, drivers of various categories, poor socio-economic status people stay in this area. There are lot of schools, colleges, private universities present in this area.

Therefore prompt detection, prevention and diseases related counseling in relevant working arena for vulnerable groups as well as educational interventions should be requisites of public and private health sectors in Bangladesh.

CONCLUSION

Penile dermatosis is not uncommon in our country. So care should be taken to prevent these disease and prompt diagnosis and appropriate treatment should be given. Some of the infections of penile region are sexually transmitted infections (STIs). Control of STIs has been given priority to avoid their role in facilitating the sexual transmission of HIV. Although the course of many of these infections/ dermatoses is benign, some of them may lead to long term sequelae, infertility and malignancy. The present study assesses the pattern of

penile dermatoses in few patients only, so multi centre study is needed.

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