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Research Paper

Disease Prevalence in Patients Attending STD Department

Medical Science

KEYWORDS : STI, Balanoposthitis, Diabetes Mellitus

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ABSTRACT

Sexually transmitted diseases [STD] and precisely, sexually transmitted infections [STI] represent a significant public health issue in developing countries like India. There seems to be a change in the prevalence and pattern of STIs in different parts of the world and at different points of time. Presence of sexually transmitted infections poses an increased risk for acquiring HIV infection as well. The increased awareness about STDs and HIV infection including AIDS has been a cause for many patients with symptoms relating to the reproductive tract seeking medical advice. A prospective study of 200 symptomatic, HIV negative patients attending STD outpatient department was carried out to find the prevalence of different types of diseases, the age group, gender predilection and the common predisposing factor for the most common disease. Balanoposthitis and Vulvovaginal candidiasis were the most common diseases encountered in men and women in whom Diabetes Mellitus was seen in nearly two third and one third of cases respectively.

Background:

There seems to be a change in the trend of disease prevalence in the population attending STI clinics. Infections caused by Human herpes virus and Human papilloma virus are now much more common than syphilis in many STI clinics. Balanoposthistis is one other common disease seen in STI department. Candida species seems to be the most common cause of balanoposthitis and vulvovaginitis. It can be severe in patients with diabetes, more so in those having poor glycaemic control. India the second most populous country in the world hosts the most number of diabetics of the world. Prevalence of diabetes has increased by over 72 % within a span of fourteen years with an increase in the prevalence of the disease in the younger age group when compared to that seen earlier. [1] The prevalence of BP may increase in the years to come with more number of young men getting affected.

Aim: To study the prevalence of different diseases seen in patients attending department of STI and to find the probable predisposing factor for the most common disease.

Materials and methods: Two hundred patients attending STD department were included in the study. Those who were positive for HIV, having major illness and or on immunosuppressive therapy were excluded from the study. All patients were examined thoroughly and the details noted. Lab confirmation was done wherever the clinical diagnosis was doubtful.

Results:

Out of 200 patients, 154 were males showing a male predominance constituting 77% of the total cases studied. The youngest and the oldest patients were 3 and 89 years old respectively. All the 200 cases studied were categorised into nine different age groups as I to IX. In the sexually active age groups, majority of the patients belonged to the age group 21- 30 years [category III]. Men were almost three times more in number when compared to women in this age group. [Tables 1].

Table 1 Age and sex distribution of symptomatic HIV negative patients. N=200

Category	AGE - years	FEMALE	%	MALE	%	TOTAL	%	F:M RATIO
I	BELOW 10	0	-	1	0.5	1	0.5	0:1
II	11-20	3	1.5	8	4	11	5.5	1:2.7
III	21-30	16	8	47	23.5	63	31.5	1:2.9
IV	31-40	14	7	38	19	52	26	1:2.7
V	41-50	12	6	31	15.5	43	21.5	1:2.6
VI	51-60	1	0.5	19	9.5	20	10	1:19
VII	61-70	0	0	6	3	6	3	0:6
VIII	71-80	0	0	3	1.5	3	1.5	0:3
IX	81 & above	0	0	1	0.5	1	0.5	0:1
	TOTAL	46	23	154	77.0	200	100	1:3.5

A total of thirty different diseases were found in the sample studied, the details of which are given in Table 2. Balanoposthitis [BP] was the most common disease seen in 72 patients out of the 154 males constituting 47% of the males attending STI clinic for treatment. Vulvo vaginal candidiasis was seen in 22 women making an equal 48% in females seeking treatment. Genital candidiasis involving both genders was the single most common disease seen in nearly half of the patients. 47% had genital candidiasis, while syphilis, scabies, vaginal and urethral discharge were the other more frequent diseases together constituting 37 % of the total sample studied. Most of Eighteen patients had more than one disease.

Table 2 Distribution of diseases in 200 HIV negative patients attending STD Department

Number	Disease	N=200	Percentage
	Balanitis	5	2.5
	Balanoposthitis	72	36
	Bubo [inguinal]	1	0.5
	Burning skin	1	0.5
	Chancroid	3	1.5
	Eruction dysfunction	1	0.5
	Fixed Drug Eruption	1	0.5
	Genital herpes	5	2.5

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	Genital pruritus	1	0.5
	Genital Ulcer #	2	1
	Herpes	9	4.5
	Inguinal lymphadenopathy	1	0.5
	Lichen sclerosus et atrophicus	1	0.5
	Lymphoedema	1	0.5
	Molluscum Contageosum	1	0.5
	Paraphymosis	2	1
	Pearly penile papule	2	1
	Pelvic inflammatory Disease	1	0.5
	Posthitis	1	0.5
	Pruritus ani	1	0.5
	Psoriasis	1	0.5
	Scabies	18	9
	Syphilis	19	9.5
	Urethral discharge syndrome	6	3
	Urethritis	4	2
	Vaginal Dischsrge Syndrome$	12	6
	Venereophobia	1	0.5
	Vitiligo	2	1
	Vulvo Vaginal Candidiasis	22	11
30	Wart	8	4

Not suggestive of herpes, chancre or chancroid; $ Other than candidiasis

BP was seen only in all categoriesexcept I & IX. Those below the age of 20 years did not manifest with BP. The youngest age having BP in this study was 22 years and the oldest 75 years. An eighty-nine year old non diabetic man presented with posthitis without involvement of the glans. The investigations were negative for candida. VVC was seen predominantly in the categories III, IV & V. VVC candidiasis was not seen below the age of 19 and above the age of 50 indicating the prevalence in only sexually active females. Prevalence of DM was seen in 60.3% and 31.9% of the patients with BP and VVC respectively. Prevalence of DM was found to be nearly 2/3 of patients with BP. It was observed that all who presented with BP in the age group 61- 70 had DM. It was also observed that more than one fifth of those in the age group 21-30 years with BP were diabetics. [Table.3] In two out of the three patients in category III, DM was detected after their visit to the STI clinic.

Table 3 prevalence of diabetes in patients with BP and VVC

Age group	BP	DM	%	VVC	DM	%
11-20	-	-	-	1	-	0
21-30	14	3	21.4	6	1	16.7
31-40	20	7	35	8	3	37.5
41-50	25	18	78.3	7	3	42.9
51-60	9	8	88.9	-	-	-
61-70	2	2	100	-	-	-
71-80	2	1	50	-	-	-
total	72	38	60.3	22	7	31.9

BP: Balanoposthitis; VVC vulvovaginal candidosis

Discussion:

The majority of people with diabetes in developed countries are in the age group 45-60, while it is above 64 years of age in developed countries. India has been estimated to have the highest number of people with diabetes in the world in the year 2030 and continue to contribute maximum to the global burden of diabetes and its complications [2] According to Cherney it was observed that adults aged 45 to 64 were the most diagnosed age group of diabetes in the year 2012. [3] New cases of diabetes in people twenty years and older had a distribution of 371,000; 892,000 and 400,000 new cases in the age groups 20-44;45-64; 65 and older respectively. The age at detection of diabetes has decreased over the recent years suggesting 5% of diabetes prevalence in the age group 25-34 years.

BP is a common condition constituting more than one tenth of patients attending genitourinary clinic. [4]. In our study, BP was the main disease constituting about 36% of the patients attending STI clinic after excluding HIV infection, malignancies and patients on immunosuppressive therapy.

VVC is most common during the reproductive age in women. Candida can be identified in the lower genital tract in upto 20% and 7% in the reproductive age group and post-menopausal women respectively.[5] Patients with Type 1 DM were found to be three times more prone for candida colonisation when compared to type 2 DM counterparts. Recent antibiotic use, chlamydial infection, habit of oral sex were found to other contributing factors apart from DM in women with VVC. [6]

In the past three decades there had been a progressive increase in the prevalence of early onset type 2 diabetes mellitus (T2DM) [7] T2DM was once considered a disease of older adults. Of late, there is a fall in the age of diagnosis and is increasingly diagnosed in adolescents and young adults to the extent that T2DM will soon become the predominant form of diabetes in some ethnic groups. [8] The number of people with diabetes in India is expected to rise to nearly seventy million by 2025. The most disturbing trend in the recent years is the shift in age of onset of diabetes to a younger age. This swing could have long lasting adverse effects on nation's health and economy. [9] The United Kingdom is also facing a similar problem of increase in the number of early onset diabetes where T2DM accounted for 5% of the diabetes population in the age less than 30 years in 2003 with a fourfold increase in the year 2006. According to Wilmot, 24% of diabetes population were in the age group less than 40 years. [10]

In this study, out of the 33 patients with BP in the age group less than 40 years 27.3% were diabetics. Whereas 81.3% of those with BP in the age group 41- 60 years had DM. All patients in the age group 61-70 had DM which drops to 50% in the age group 71-80 years. It is to be noted that groups VII, VIII and IX had only male patients.

The age of onset of type 2 diabetes mellitus is falling and this condition has become increasingly common among those aged under 30 years including children and adolescents. Early-onset type 2 diabetes may be a more aggressive disease phenotype to develop cardiovascular complications than later-onset cohort, reflected by more adverse cardiovascular risk profile and higher relative risk for myocardial infarction [MI]. [11]. It has also been reported that diagnosis of DM before the age of 45 years is associated with a 14 fold increased risk of [MI]. Compared to 4 fold increase in those diagnosed after 45 years of age. [12]

Conclusion:

Patients with early onset DM are at an increased risk of complications including MI. It therefore becomes very important to detect DM at an early age. BP being the most common disease for which people seek advice in the STI clinic, every patent with BP irrespective of the age should be screened for DM and kept under regular follow up with periodic and repeated screening in order to detect diabetes at its very onset. This will certainly reduce the future complications by proper treatment and lifestyle modification.

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