

Trends of Sexually Transmitted Infections : A 33 Year Experience

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Abstract

Background : Sexually Transmitted Infections (STIs) are a major public health problem the world over. This study was aimed at analyzing the trends of STIs in a 33 year period at a tertiary care service hospital.

Methods: A retrospective data analysis was done of all the cases diagnosed as STIs during a 33 year period from 1974 to 2006.

Result: A total of 4532 STIs were seen in 4215 males. The commonest STI was chancroid (37.2%), followed by syphilis (16.2%). The commonest age group involved was the 21-30 year group (57.6%). STIs declined from a total of 311 cases in 1974 to seven cases in 2006. This trend was mirrored in all major STIs. Multiple STIs were seen in 317 (07.5%) cases.

Conclusion: The frequency of STIs has shown a distinctly decreasing trend from over the last 33 years.

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Key Words : Sexually transmitted infections; Trends

Introduction

Sexually Transmitted Infections (STIs) are a major health problem throughout the world. In developing countries, STIs are ranked among the top five diseases for which adults seek health care services. However, changes in social behavior have altered the pattern of STIs. A study of trends of STIs is important to assess their prevalence and to implement appropriate control measures.

Material and Methods

In this retrospective study, we analysed the records of male soldiers diagnosed and admitted with STIs during a 33 year period from Jan 1974 to Dec 2006 at a tertiary care hospital at Bangalore. The diagnosis was based on history, clinical examination and relevant laboratory investigations. Enzyme-linked immunosorbent assay (ELISA) tests for HIV-1 & 2 antibodies were done on all cases from 1993 onwards. All cases of HIV infection not due to STIs were excluded from the study. The results were compiled and the data analyzed.

Results

A total of 4532 STIs were seen in a total of 4215 subjects. Multiple STIs were seen in 317 instances (7.5%). The age distribution of cases is given in Table 1.

The commonest STI was chancroid (1684 cases, 37.2%), followed by syphilis (737, 16.3%), lymphogranuloma venereum (LGV) (632, 13.9%), gonorrhoea (543, 12.0%), condyloma acuminata (337, 7.4%), non gonococcal urethritis (NGU) (263, 5.8%), balanoposthitis (BP) (226, 5.0%), herpes genitalis (HG) (94, 2.1%) and granuloma inguinale (GI) (13, 0.3%) (Table 2).

The incidence of all STIs showed a declining trend from a total of 311 cases in 1974 to seven cases in 2006. This trend was mirrored in all major STIs (Fig. 1). A total of 19 cases of HIV infection in STI cases were reported from 1997 to 2006 with no significant associations and fluctuating trends.

Discussion

All our study subjects were male soldiers. In the Armed Forces, soldiers often stay away from their families, which could possibly predispose them to high risk behaviour and contracting STIs. Majority of cases were in their second and third decades of life, which is in accordance with most studies [1]. This is because of sexually active population comprising this age group.

The commonest STI varies in different studies from syphilis [2-4] to condyloma acuminata [5] and herpes genitalis [6]. However, most studies reported chancroid as the leading cause of STIs [7-9], as observed in our study. This variance could be due to different geographical regions besides different biological, environmental, cultural and socio-economic factors.

The trend of STIs in our study showing a gradual decline, has also been reported in other studies [1,4,7,9]. The reason for this decline could be attributed to better living standards with improvement in medical and health educational facilities. The advent of effective treatment regimens and better facilities for treatment of STIs at peripheral health care centers is also a contributory factor for the decreased incidence of STIs. Other reasons could be the widespread use of antibacterials, fear of

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Table 1

Age wise distribution of all STI cases

Age group	Number	Percentage
<20	1234	29.3
21-30	2427	57.6
31-40	494	11.7
>40	60	1.4
Total	4215	100

Table 2

Incidence of various STIs

STI	Number	Percentage
Chancroid	1684	37.2
Syphilis	737	16.3
LGV	632	13.9
Gonorrhoea	543	12.0
CA	337	7.4
NGU	263	5.8
BP	226	5.0
HG	94	2.1
GI	13	0.3
Total	4532	100

(LGV=lymphogranuloma venereum; CA=condylomata acuminata; NGU=non-gonococcal urethritis; BP=Balanoposthitis; HG=Herpes genitalis; GI=Granuloma inguinale)

HIV infection compelling people to practice safe sex and seek early treatment or even reporting to private practitioners expecting more confidentiality in management [1,2]. Some studies have reported contrary findings with rise in viral STIs and syphilis, underscoring the importance of regional socio-cultural diversities [2]. These differing trends only serve to highlight the ethnic and cultural differences in various study groups.

Multiple STIs have been reported in 51% of female sex workers in a study [10]. Though the source of STIs in our study population is not definitely delineated, multiple STIs may reflect the behavioural pattern of the study population as well as the prevalence pattern in the index sources.

A small peak in the incidence of all major STIs during the late 1980s is an interesting observation in our study, which could be due to an increased movement of soldiers during this time period for military operations. Migrant population is more prone to contracting STIs ostensibly due to multiple exposures to multiple partners, lack of family restraint, alcohol consumption, infrequent use of condoms, stresses of job or low perceived vulnerability to STIs [11]. It is possible that some of these could justifiably apply to our study group too.

To conclude, our retrospective study brought out a declining trend of all STIs over the study period. The study suffers from a limitation that it was hospital based

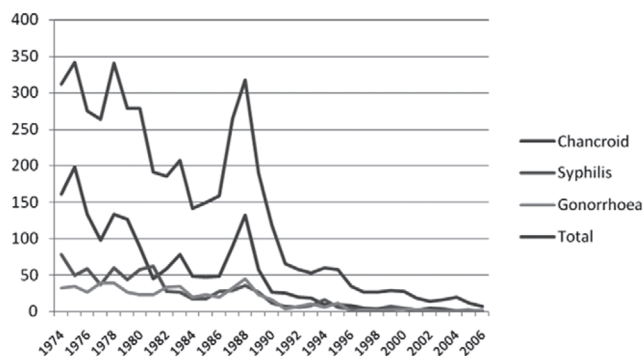


Fig. 1 : Trends of major and total STIs: 1974-2006

and did not include females with STIs and hence, may not necessarily reflect the trend in the general population.

Conflicts of Interest

None identified

Intellectual Contribution of Authors

Study Concept : Wg Cdr S Grover

Drafting & Manuscript Revision : Wg Cdr S Grover,
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