

Sexually transmitted diseases in children in India

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ABSTRACT

Sexually transmitted diseases (STDs) in children are not uncommon in India, though systematic epidemiological studies to determine the exact prevalence are not available. STDs in children can be acquired via sexual route or, uncommonly, via non-sexual route such as accidental inoculation by a diseased individual. Neonatal infections are almost always acquired intrauterine or during delivery. Voluntary indulgence in sexual activity is also an important factor in acquisition of STDs in childhood. Sexual abuse and sex trafficking remain the important problems in India. Surveys indicate that nearly half of the children are sexually abused. Most at risk children are street-based, homeless or those living in or near brothels. Last two decades have shown an increase in the prevalence of STDs in children, though most of the data is from northern part of the country and from major hospitals. However, due to better availability of antenatal care to majority of women, cases of congenital syphilis have declined consistently over the past two-three decades. Other bacterial STDs are also on decline. On the other hand, viral STDs such as genital herpes and anogenital warts are increasing. This reflects trends of STDs in the adult population. Concomitant HIV infection is uncommon in children. Comprehensive sex education, stringent laws to prevent sex trafficking and child sexual abuse, and antenatal screening of all the women can reduce the prevalence of STDs in children.

Key words: Children, sex education, sex trafficking, sexual abuse, sexually transmitted diseases

INTRODUCTION

Sexually transmitted diseases primarily affect sexually active population in the reproductive age group and are largely acquired through sexual act or close contact with genitals. However, in children the acquisition can be sexual or nonsexual such as accidental contact with secretions or inoculation by a diseased individual. The route of transmission may have a bearing on the age of children presenting with sexually transmitted diseases. The probability of intrauterine and perinatal transmission is more likely when the child is two years of age or younger. For children between the ages of two and ten, sexual abuse should be considered as a possible mode of transmission, followed by intrauterine and perinatal transmission. In children near puberty, voluntary sexual activity and sexual abuse represent the main modes of transmission.

DETERMINANTS OF SEXUALLY TRANSMITTED DISEASES IN CHILDREN

The prevalence of sexually transmitted disease in children depends on the prevalence of STDs in the adult population, the prevalence of child sexual abuse in the society and many other social and legal factors.

Sexual abuse

The possibility of sexual abuse as a cause of childhood STIs is usually underestimated. It is usually a hidden problem and is an important causative factor for STIs in children. Transmission of STD pathogens occurs in 2-10% of abused children and risk becomes even higher if penetration occurs.^[1]

History of child sexual abuse is variably reported from different parts of country ranging from 5%^[2] to 74%^[3]

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of children with STIs. This widely variable incidence also reflects the stigma associated with these diseases and fear to divulge the truth from parents especially mothers.

Ministry of Women and Child Development, Government of India conducted largest national level survey among 17,220 children and adolescents in the age range of 5-18 years to estimate the burden of sexual abuse and the results were shocking. It was found that every second child in the country was sexually abused.^[4] Among them, 52.94% were boys and 47.06% were girls, mostly in the age group of 12 to 15 years. Assam reported the highest percentage of sexual abuse (57.27%) followed by Delhi (41%), Andhra Pradesh (33.87%) and Bihar (33.27%).^[4]

Most common perpetrators are either neighbours or relatives. Most of the abused children belong to the lower socioeconomic group. Myths about cure of STDs by having sex with children were one of the factors initially considered to be responsible for child sexual abuse. Children who have been sexually abused or exploited frequently suffer from severe mental, emotional and behavioral trauma (in addition to acquisition of STIs) which manifests itself in social isolation, low self esteem and the inability to have normal sexual relations.

Child prostitution

Studies and surveys sponsored by the ministry of women and child development estimate that there are about three million prostitutes in the country, of which an estimated 40% are children.^[5] A random sample of 28 brothels at G.B. road, Delhi revealed that almost 60% of the prostitutes were children.^[6] The girls are dedicated to the Goddess by name of “devadasis” and forced into virtual prostitution and made to entertain men in order to invoke the blessings of the deity. Though “devadasis” are banned by Prohibition of Dedication Act of 1982, still it was estimated that in Delhi, 50% of the prostitutes are “devadasis” and 15% in Bombay, Pune, Solapur, and Sangli.^[5]

Human trafficking

Young girls may be the victims of sex trafficking. About 7000 sex workers migrate to Indian metropolitan cities especially Mumbai, every year and approximately half of them are minors.^[7] They may be sold by their parents, deceived with promises of marriage or lucrative job or kidnapped and sold to brothel owners. Tribal Kolta women and girls from Garhwal hills are

compelled to become prostitutes to rescue their family from debt bondage. Poverty stricken young girls from Bengal are lured with promises of attractive jobs and marriage.^[7]

A study from Karnataka showed that 11.5% of 61 repatriated women and girls who reported being trafficked in to sex work were 14 years at the time of initiation of sex.^[8] Another analysis of data of rescued girls and women from brothels in Mumbai showed that over half of the victims were trafficked as minors, i.e. younger than 15 years of age.^[9] Younger girls are generally not able to negotiate safer sex such as condom use with their clients. A study of HIV prevalence showed that very young age (14 years or younger) at the time of trafficking was associated with over three-fold increased risk of HIV infection relative to trafficking at 18 years or older.^[10]

Premature sex

STDs are becoming increasingly common in the preadolescent age group. Early sexual maturity, increased promiscuity, greater sexual liberation and sexual offences are the probable causes. More adolescents are now sexually experienced due to change in cultural and moral values. Sexual activity is generally very high in homeless street children, putting them at risk of acquiring HIV. In Bangalore, 61% of 121 street boys/men aged 9-23 years were sexually active and 36% of them had reported initiation of sex between 10 and 12 years of age.^[11] Pagare *et al.* have found that one third of homeless boys in Delhi reported sexual abuse.^[12]

BURDEN OF SEXUALLY TRANSMITTED DISEASES IN CHILDREN, INDIA

Various studies have been done in India on epidemiology of sexually transmitted diseases in adults, but there is a paucity of data on epidemiology of these diseases in children. There are no community-based studies available from the country and most of the published studies assess the profile of sexually transmitted diseases in pediatric patients attending big hospitals and are from the northern part of the country.

Last two decades have shown an increase in the prevalence of STIs in children. A study from Delhi showed a fourfold increase in STI cases among children from year 1981 to year 1992.^[13] The prevalence

of pediatric STD cases reported from Delhi in the years 1995-2000 has ranged from 0.82%^[3] to 3.4%.^[14] The prevalence, however, observed from another center from the capital in late eighties was 16%.^[15] A recent study from Rohtak, North India has shown a prevalence of 1.02%^[2] and another from Ahmedabad (Western India) has reported 1.98% prevalence of pediatric STDs in years 2002-2005.^[16] The incidence of STDs in children in Delhi (1966-1975) was 0.63% amongst cases registered in a VD clinic.^[17] These figures are likely to be only a tip of the iceberg, as many infections in children remain undiagnosed due to failure to recognize the problem in this age group, stigma attached to them, asymptomatic nature of the infections and fear of the perpetrator. Furthermore, many healthcare professionals often do not screen children for these infections, even after revelation of sexual abuse. This may be due to lack of awareness of the problem or to non-availability of diagnostic tests for screening.

In children with STIs, boys usually outnumber the girls with proportion of boys ranging from 52 to 78%.^[16] This reflects the greater possibility of sexual adventures in adolescent boys, increase in homosexual practices, greater attendance of males in hospitals compared to females and often asymptomatic nature of STDs in females.

Most of the children with STDs do not have concomitant HIV infection. Only few studies have mentioned concurrent HIV infection. This is seen only in 1-5%^[3,16] of all pediatric STI patients.

Maximum prevalence of pediatric STIs has been reported in the age group of 11-14 years. Nearly two-third of the cases reported are in this age group.^[2,3,14,16] This may also point to early onset of voluntary or consensual sexual activity occurring in this group. Homosexual and bisexual behavior increases the chances of acquiring STDs including HIV at an early age.

Most of these children with STIs are illiterate and belong to low socioeconomic background. Few are from remand homes for juvenile delinquents.

Prevalence of homosexuality among the children with STIs had been 4% in late eighties and early nineties from Delhi^[18] but gradually increased to 10-11% in the years 1996-2002.^[14,19] A recent study from Gujarat (2002-2005) has reported history of homosexual

contact in 43.2% of the children with STIs.^[16]

In recent years, there has been a shift in pattern of STDs from bacterial to viral among adults due to indiscriminate use of broad-spectrum antibiotics, effectiveness of syndromic approach of treatment and up-gradation of health services at the primary level. This trend has also been seen in pediatric STIs.

Syphilis and gonorrhoea were the predominant etiological agents for pediatric STIs in the past.^[15,18] There has been a considerable fall in the incidence of congenital syphilis in last two decades. It was reported from the New Delhi in 57% of children with STIs during the period of 1986-1995.^[18] Its prevalence from the same area reduced to 4-5% in the years 1995-2000.^[3,14] Decline in congenital syphilis could be explained on account of better antenatal screening and effective treatment of the would be mothers before delivery.

The percentage prevalence of acquired syphilis among all STIs in children has also gradually declined over last two decades from 71.3% (1986-95),^[18] 46.8% (1996-2000),^[14] 32.4% (2002-2005)^[16] to 22.2% in the year 2001-2007.^[2] The most common presentation of acquired syphilis in children is usually secondary syphilis, most commonly manifesting as condyloma lata.^[14,15,19] Lymphadenopathy and cutaneous rash are the other common manifestations.

Gonorrhoea, like other bacterial STIs, has shown a declining trend among children with STIs. In year 1988-1989, the prevalence of gonorrhoea in Delhi among children with STIs was 24.1% (14 out of 58 cases)^[15] and 5.6% (1/17) in 1998-2002.^[19] Another recent study from north India has also reported only two cases of gonorrhoea out of 37 (5.4%) children with STIs (2002-2005).^[16] The prevalence of chancroid in children with STIs has also decreased dramatically from 22.4% (13/58) in 1988^[15] to detection of only occasional cases in 1998 (1/17, 5.6%)^[19] and 2005 (1/37, 2.7%).^[16] No data is available on donovanosis in children.

Similar to the pattern seen in adult STIs, viral STIs have shown an upsurge in the recent past. The prevalence of genital herpes among children with STIs in Delhi has gradually increased from 2.05% (1/43, 1986-95),^[18] to 5.6% (1/17, 1998-2002),^[19] and 6.4% (3/50, 1996-2000).^[14] Another study from Gujarat reported genital herpes as the most common cause of STIs in 13/37 children with prevalence of 35.1% in 2007.^[16]

Condyloma acuminata (CA) is another important viral STI, the prevalence of which has been increasing with time [Figure 1]. The prevalence of CA among pediatric STIs reported in year 1988-1989 from a center in Delhi was 6.9%^[15] which showed almost a two fold rise after a decade from the same center.^[14] Another center from Delhi reported a prevalence of 14.7% (19/127) of genital warts among children with STIs (1995-2000).^[3] Jain *et al.* found genital warts as the most common STI among children in 13 out of 18 patients (72%) in 2001-2007 with half of them presenting in the perianal area.^[2] A study from the South showed a prevalence of only 0.15% childhood condyloma acuminata among all STI cases during years 1984-94.^[20]

Genital warts have been reported in all age groups of children including infants. Besides sexual abuse, perinatal and nonsexual contact through kissing, fondling etc should also be considered as causes of genital warts in infants and toddlers.

Mixed STDs are not uncommon in children. Various combinations of bacterial STIs and bacterial and viral STIs together are also seen with a prevalence ranging from 4 to 6% in various studies.^[9,12]

Burden in other countries

The WHO estimates that 150 million girls and 73 million boys under 18 have experienced forced sexual intercourse or other forms of sexual violence involving physical contact.^[4] A review of epidemiological surveys from 21 countries, mainly high- and middle-income countries, found that at least 7% -36% women and 3%-29% of men reported sexual victimization during their childhood.^[4]



Figure 1: Perianal warts in a toddler. Such children should be investigated for other STDs and sexual abuse

Southeast Asia is thought to be the hub of child prostitution. According to UNICEF, more than one million children in Asia including Thailand, Philippines, and India, have been sold to brothels or street pimps for sexual exploitation. Child prostitutes are in demand in other countries too.^[21] From 300,000 to 600,000 of 2 million prostitutes in the USA are under the age of 18. About 100,000 children are forced into child prostitution in Taiwan. The condition is equally worse in countries of Latin America- there are 500,000 child prostitutes in Peru and Brazil each. Canada, a developed country, has 200,000 child prostitutes.^[21]

Children are mostly trafficked for sexual exploitation from Eastern Europe, and North Africa, and Western Europe, the United States, United Arab Emirates and New Zealand are among the major consumers. Russia is both a supplier and consumer.^[21]

SUMMARY AND DIRECTIONS

Early onset of sexual activity, homosexual practices, presence of STIs in the parents and child abuse increase the risk of acquiring STIs in children. So, children with STDs should be fully assessed to screen for child sexual abuse or the circumstances which brought in the infection. Antenatal screening of all the women should be carried out and, if found to be infected with STIs, they should be treated adequately to prevent the perinatal transmission. Congenital syphilis is a preventable disease. Every case of congenital syphilis indicates toward failure of maternal and child health services in the country. Comprehensive sexuality education should be every child's right, though central and various state governments are reluctant to implement it. Sexual abuse should be considered in every case and should be dealt with in a non-confronting approach. Psychological support should be provided to the victims. Health education along with behavior therapy and regular screening is required for high risk groups like street children and children at work. More epidemiological, community-based studies are needed to formulate strategies for their prevention. Stringent laws against sex trafficking and child labor are needed and a rehabilitation scheme is required for delinquents to prevent themselves from being victims of sexual abuse. It is important to improve awareness among children, parents, adolescents and general population. It is also important to build a more patient friendly health care system where victims get support and treatment, thereby enabling prevention or reduction in STDs among children.

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