Prevalence of Human Immunodeficiency Virus Infection in Pregnant Women

Dear Editor,

Large scale antenatal surveys for the prevalence of human immunodeficiency virus (HIV) infection have been conducted in Europe, USA and some countries of Africa.1,2 This problem has also been studied by some workers in India. 3-5 However, there is a paucity of data regarding seroprevalence in different parts of this country. This study presents the results of HIV screening of pregnant women in Hyderabad region during the last five years. Pregnant women undergoing antenatal care or medical termination of pregnancy at Princess Esra Hospital and Owaisi Hospital in Hyderabad were screened for the presence of anti HIV antibodies in last six years (July 2001- July 2006). The testing was based on an unlinked and anonymous screening strategy.

The initial screening was done by comb AIDS. Tridot and EIA were used as supplementary tests on all positive cases. The tests were performed as per the manufacturer’s instructions and recommendations of national AIDS control organization (NACO). Serum was subjected once to E/R/S for HIV. If negative, the serum was considered free of HIV and if positive, the sample was considered HIV infected. This is similar to strategy one with respect to donor blood utilization in blood banks. The unit of blood testing positive is discarded.

With respect to surveillance, the serum is considered negative for HIV if the first ELISA report is negative, but if reactive, it is subjected to a second ELISA test, which utilizes a system different than the first one. It is reported reactive only if the second ELISA confirms the report. This strategy is used for diagnosis only if some AIDS indicator disease is present. It is similar to strategy two with the added confirmation of a third reactive ELISA test being required for a sample to be reported HIV positive. The test to be utilized for the first ELISA is one with the highest sensitivity and for the second and third ELISAs, tests with the highest specificity are to be used. Strategy two and three are used for diagnosis of HIV infection. ELISA 2 and ELISA 3 ought to be tests with the highest positive predictive value possible to eliminate any chance of false positive results. Strategy three is used to diagnose HIV infection in asymptomatic individuals indulging in high-risk behavior.

The results of this study show the number of women tested for HIV antibody during 2001 to 2006 to be 10. The table shows the number of patients tested over the years.

These women were found to be reactive by all three strategies. HIV was practically absent during 2001 and 2002 in the study group. It showed a slow but steady increase thereafter. By the end of 2003 up to 0.5 per thousand of these women had serological evidence of infection by HIV-1. During 2004 and 2006 the seropositivity rose to 0.8, 1.0 and 1.1 per thousand respectively. The women were between 20-40 years of age and belonged to low socioeconomic status. Three of the HIV positive women were primigravida and three were second gravida and remaining four were multigravida and had opted for MTP (Table).

The present study has shown that seropositivity rate increased from 0-1.1 per thousand in pregnant women in the period of five years. Similar rates (ranging from 1-5 per thousand) have been reported by ICMR in India.3 A study at Vellore has reported a seropositivity rate of 0.4 to 1 per thousand in expectant mothers.4 While studies conducted at Miraj and Bombay in Maharashtra and Manipur have reported a much higher seropositivity of 4.5, 2.5 and 0.8% respectively.5

Virtually all HIV infection that occur in children, are a consequence of vertical transmission (that is, from mother to child), interruption of this mode of passage would change the future of AIDS in children. Routine HIV testing of all pregnant women is mandatory and strict universal biosafety precautions should be followed in providing obstetric and other patient care. Proper health education and counseling of seropositive mothers should be done.

References


2. Pizzo PA, Butter KM. In the Vertical transmission HIV, timing

<table>
<thead>
<tr>
<th>Year</th>
<th>Number screened</th>
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<tbody>
<tr>
<td>2001</td>
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<td>2002</td>
<td>1445</td>
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<tr>
<td>2005</td>
<td>2986</td>
</tr>
<tr>
<td>2006</td>
<td>3602</td>
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<tr>
<td>Total</td>
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Non-typhoid Salmonellosis: Emerging Infection in Pune?

Dear Editor,

Salmonellosis is an important public health problem all over the world. It has been regarded as a worldwide problem in both man and animals.\(^1\) In recent years, non-typhoid Salmonellae (NTS) are gaining eminence, but they are rarely reported in our country.

The present study was a retrospective study in and around Pune to assess the magnitude of non-typhoid \textit{Salmonella} infections with the antibiotic susceptibility pattern of the organisms.

Over a five-year period (2000-2004), 85 isolates belonging to \textit{Salmonella} spp. were isolated from clinical samples of patients of Sassoon General Hospital. They were further sent to the National \textit{Escherichia} and \textit{Salmonella} Center (NESC), Kasauli, for serotyping and confirmation. Antimicrobial susceptibility testing was done by Kirby Bauer disk diffusion method.\(^2\)

Of the 85 salmonellae, 65.9\% were \textit{Salmonella typhi}, while 34.1\% were non-typhoid salmonellae (NTS). The distribution of non-typhoid salmonellae is shown in the table. Majority of the NTS isolates were obtained from neonates (67.8\%) and pediatric patients (14.2\%). Blood samples yielded most of the NTS isolates followed by stool samples and a single cerebrospinal fluid (CSF) sample. Human sources, as well as non-human sources like animals, birds, poultry, hospital wards, food supplies, milk, water and sewage, have been implicated in the spread of these NTS infections.\(^3\)

Emergence of antimicrobial-resistant \textit{Salmonella} strains is of great concern worldwide.

Antibiotics for the treatment of NTS infections are important in cases with bacteremia and focal lesions. However, they should be avoided in uncomplicated acute gastroenteritis as their unwarranted use can promote the emergence of drug-resistant strains.\(^4\) Our study shows a high percentage of NTS isolates resistant to the commonly used drugs - i.e., 86\% resistance was seen with ampicillin; and 72.4\% resistance to cefotaxime, chloramphenicol and gentamicin was observed. No resistance was seen with amikacin and ciprofloxacin. Thus, our study highlights the fact that infections due to NTS seem to be an emerging problem in Pune, and periodic accurate

\begin{table}[h]
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\begin{tabular}{|c|c|c|c|c|}
\hline
Year & NTS isolates & No. (samples) & Clinical diagnosis & Age group of patients \\
\hline
2000 (n=19) & S. worthington (n=17) & 15 (blood) & Septicaemia & All neonates (16) \\
& S. weltervreden (n=1) & 1 (CSF) & Septicaemia & Paediatric (1) \\
& S. bareilly (n=1) & 1 (stool)* & Acute gastro enteritis & Paediatric (1) \\
& & 1 (stool) & Acute gastro enteritis & \\
& & 1 (stool) & Acute gastro enteritis & \\
2001 (n=5) & S. worthington (n=5) & 4 (blood) & Septicaemia & Neonates (3) \\
& & 1 (stool) & Organic mood disorder & Paediatric (1) \\
& & & Acute gastro enteritis & Adult (1) \\
2002 (n=1) & S. typhimurium (n=1) & 1 (blood) & Fever with acute gastro enteritis & Adult (1) \\
2003 (n=4) & S. enteritidis (n=4) & 4 (blood) & Pyrexia of unknown origin & Adults (3) \\
& & & Septicaemia & Paediatric (1) \\
2004 (n=0) & Nil & - & - & - \\
\hline
\end{tabular}
\caption{Non-typhoid salmonellae isolated during 2000-2004 (n = 85)}
\end{table}

*One of the 16 neonates with septicaemia yielded \textit{Salmonella worthington} in stool as well as in blood, NTS - Non-typhoid Salmonellae, CSF - Cerebrospinal fluid