Clinical and Immunoviralogical Onservalational Study to Evaluate the Prevalence Rate of Seropositivity among HIV Infected Patients with High Risk Clinical Profile

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**Abstract**

**Aim:** Understanding of clinical profile and magnitude of pediatric HIV is essential for the policy makers and clinicians. Main objective of the study is to evaluate the prevalence rate of seropositivity among HIV infected patients with high risk clinical profile. **Method:** 302 patients with high risk clinical profile for HIV seropositivity and aged between 18 to 52 years were recorded over almost 1 year for this hospital based prospective observational clinical study. Data were maintained in a predesigned pro forma. Informed consent was taken from the patients before enrolling them into the trial. **Result:** Majority of the patients were belongs to in between 2 to 18 years (21%) and 25-50 years (13%) and >50 years (12%). Failure to thrive in 239 (82%) was the most commonest clinical features associated with high risk profile along with chronic diarrhoea in 94 (31%), persistent fever in 175 (58%) and cough >1 month (39%) of 302 patients who were screened. It has been also observed that nutritional problem like malnutrition is also a major clinical manifestation as almost 178 (59%) subjects were affected with it. Oropharyngeal candidiasis, Generalized lymphadenopathy, repeated systemic infections and seborrhoeic dermatitis were present in 14 (5%), 34 (11%), 15 (5%) and 11 (4%) patients respectively. Chronic diarrhoea was a significant independent clinical risk factor for predicting HIV seropositivity. Patients with chronic diarrhoea were at 11.15 times greater risk of being HIV seropositive compared to those who did not have diarrhoea. **Conclusion:** Number of clinical manifestation present determine probability of HIV infection. Vertical transmission in this study indicating HIV positive parents.

**Keywords:** Pediatric HIV, Seropositivity, High Risk, clinical manifestation.

**INTRODUCTION**

Globaly it has been considered that patients having human immune deficiency virus (HIV) infection is burden which increasing at a very high pace an as per the public health concern it became one of the most significant issues. With an estimated 3.4 million children living with HIV worldwide; 3, 30000 (280 000- 380 000) new HIV infections and 2,30000 (200 000-270 000) HIV-related deaths occurred in 2011 [1]. More than 90% of these infections were vertically acquired from mother to child.

It has been observed that there were several studies that has done in different part of globe who were infected with HIV, and majority of this trial had been conducted in different part of Africa including Nigeria, Ghana etc, but there were very few trial is available in asian country specially in India [2-8].

Keeping this in mind the present study was initiated to Understanding of clinical profile and magnitude of pediatric HIV is essential for the policy makers and clinicians. Main objective of the study is to evaluate the prevalence rate of seropositivity among HIV infected patients with high risk clinical profile.

**METHOD**

302 patients with high risk clinical profile for HIV seropositivity and aged between 18 to 52 years were recorded over almost 1 year for this hospital based prospective observational clinical study.

The selection of patients in the present study was based on “WHO revised clinical classification of HIV in infants and children, 2006” and as these manifestations have been reported to be associated with...
the seroprevalence rate in other studies or are considered to be highly specific manifestation for HIV infection. Data were maintain in a predesigned pro forma. Informed consent was taken from the patients before enrolling them into the trial [9-13].

After thorough clinical examination, findings were recorded in the proforma. Routine and relevant investigations were performed in all cases. Next the patients were subjected to HIV testing by initial ELISA test.

The data was transfer to an excel sheet and then analysed and the relevant charts and table was made for further analysis in details.

RESULT

Of the 302 patients screened, age distribution was as in Figure-1. Majority of the patients were belongs to in between 20 to 35 years 67% followed by 35 to 50 years (21%) and >50 years (12%).

![Fig-1:](image)

Data was transfer to an excel sheet and then analysed and the relevant charts and table was made for further analysis in details.

Table-1: HIV sero-status in relation to each clinical risk factor

<table>
<thead>
<tr>
<th>Clinical Manifestations</th>
<th>HIV seropositive (Percent out of N)</th>
<th>HIV seronegative (Percent out of N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to thrive (n=248)</td>
<td>9 (4%)</td>
<td>239 (96%)</td>
</tr>
<tr>
<td>Fever for more than one month (n=175)</td>
<td>0</td>
<td>175 (100%)</td>
</tr>
<tr>
<td>Chronic diarrhoea (n=94)</td>
<td>10 (10%)</td>
<td>84 (90%)</td>
</tr>
<tr>
<td>Persistent cough (N=118)</td>
<td>2 (2%)</td>
<td>116 (98%)</td>
</tr>
<tr>
<td>Severe malnutrition (n=178)</td>
<td>1 (0.5%)</td>
<td>177 (99.5%)</td>
</tr>
<tr>
<td>Oral thrush (n=14)</td>
<td>1 (7%)</td>
<td>13 (93%)</td>
</tr>
<tr>
<td>Generalized lymphadenopathy (n=34)</td>
<td>1 (3%)</td>
<td>33 (97%)</td>
</tr>
<tr>
<td>Hepatomegaly(n=68)</td>
<td>0</td>
<td>68 (100%)</td>
</tr>
<tr>
<td>Repeated common systemic infections (n=15)</td>
<td>1 (6%)</td>
<td>14 (94%)</td>
</tr>
<tr>
<td>Seborrheic dermatitis (n=11)</td>
<td>2 (18%)</td>
<td>9 (82%)</td>
</tr>
<tr>
<td>Recurrent bacterial skin infections (n=2)</td>
<td>1 (50%)</td>
<td>1 (50%)</td>
</tr>
<tr>
<td>Disseminated tuberculosis (N=79)</td>
<td>0</td>
<td>79 (100%)</td>
</tr>
</tbody>
</table>

As shown in Table-2, chronic diarrhoea was a significant independent clinical risk factor for predicting HIV seropositivity. Patients with chronic diarrhoea were at 11.15 times greater risk of being HIV seropositive compared to those who did not have diarrhoea.

Table-2: Chronic diarrhoea compared to other risk factors

<table>
<thead>
<tr>
<th>HIV Status</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic diarrhoea present</td>
<td>10</td>
<td>84</td>
</tr>
<tr>
<td>Chronic diarrhoea absent</td>
<td>3</td>
<td>205</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>289</td>
</tr>
</tbody>
</table>
Discussion

HIV is one of the major concerns across the globe and already became one of the most concern issues including developing countries like India. It has been also seen over few years that this disease was spreading rapidly with both in magnitude and in diversity not only in India but across the globe. Even though there were few studies were present in other part of the globe specially in African countries but in India there were no such big studies, as a result still for making any estimation or taking any action towards making any public health strategy we need to depends on the global studies. Even to conduct a counselling and spreading awareness through public media whether be it print or electrical involves high cost [14].

The impact of HBV on HIV disease is less clear. Whilst one study showed an increased rate of HIV progression to AIDS [15], others investigators did not show any change in the progression of HIV disease or survival [16]. However, coinfection with HBV has been associated with increased hepatotoxicity to highly active antiretroviral therapy (HAART) [17, 18]. With easy access to and success of HAART in reducing mortality from AIDS, longevity means that coinfected children are more exposed to the aforementioned complex interactions.

Thus, the probability of HIV infection in a patients depends upon the nature and number of manifestations present with chronic diarrhea being a significant risk factor for seropositivity. All HIV positive patients had HIV positive parents indicating vertical transmission from parents to them, showing thereby the importance of screening all antenatal cases and children of HIV positive parents.

This study has opened up a new thoughts which need to be tested in much more or large number of patients to get a more confirmed conclusion which will further help to create more appropriate and effective health strategy in developing country like India.

Conclusion

Number of clinical manifestation present determine probability of HIV infection. Vertical transmission in this study indicating all HIV positive parents.

References