

that of children with trisomy. Compared to the previous report of development in Indian children with this syndrome [10], the motor and social development in children with trisomy was similar. Significant improvement ( $P < 0.001$ ) was seen in speaking. Children with trisomy spoke by 30.36 months vs 42.4 month in the earlier report [10]; probably due to early diagnosis, interventions, and improved socio-economic environment. In conclusion, the secular trends in development of Indian children with Down syndrome over the last three decades show similar motor and social development profile with improvement in language domain. Further studies need to standardize growth charts for Indian children with Down syndrome and evaluate the deviations in growth and development in these children.

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## HIV Antibody Tests for Young Infants: a Lost Opportunity to Detect Negative Status

The most frequently posed question is 'Is my child HIV negative?' Unfortunately it is difficult to answer this in situations with no facility for virological assays. The present guidelines categorically state that rapid HIV antibody testing is not recommended in HIV-exposed infants less than 18 months of age because of persisting maternal antibodies. DNA PCR or RNA qualitative tests are the recommended tests [1-4]. This recommendation is focused on detecting HIV-infected infants, not the HIV negative.

In our scenario, DNA PCR is expensive, not freely available, needs repeated testing and has longer reporting time. Rapid HIV antibody tests have the potential to

detect negative status and are underutilized due to ignorance in interpretation of results. Early detection of negative status is useful to assess effectiveness of PPTCT interventions, limit need for long-term follow up and allay parental anxiety. National AIDS Control Organization (NACO) has only recently introduced DNA PCR for infant testing in a phased manner. They recommend DNA PCR in children <6 months, and rapid test for those >6 months with DNA PCR in this age group only if rapid test is positive.

We assessed the utility of HIV rapid tests in HIV-exposed infants less than 18 months of age to detect negative status.

This was a retrospective, descriptive study, between January 2006 to August 2010 at St. John's Medical College Hospital, Bangalore. We included all HIV-exposed infants less than 18 months, registered in our comprehensive PPTCT program. All infants underwent rapid HIV antibody test and confirmatory DNA PCR tests

or repeat rapid tests at 18 months to confirm negative status. In our study, all infants testing positive initially on rapid tests tested negative on repeat testing at various ages. In all, 78 samples from 63 infants were tested. Each sample underwent two tests with different kits (Combaids/ Capillus and Tridot) and the results were categorized as positive result (not the same as HIV positive status) if 2 tests positive, negative result if 2 tests negative (same as negative status), and indeterminate if 1 positive and 1 negative test. Testing in breastfed group was repeated 6 weeks after cessation of breast feeding. Of the total 78 samples, 62 tested negative, 8 were tested positive and 8 indeterminate. We categorized the infants into different age bands to assess the percentage negatives with relation to age (**Table I**).

Studies reveal very limited durations of follow-up of HIV-exposed infants, underscoring the need for confirming HIV status as early as possible [5]. There was rapid decay of maternally derived antibodies in 31 negative children by 6 months, with 100 % of them testing negative between 7–15 months [6]. In the absence of HIV PCR tests, rapid tests done early in infancy are useful to detect negative status. In our study, a significant percentage of infants tested negative by 6 months of age.

Infants can be offered HIV rapid antibody testing even at <18 months of age to prevent a lost opportunity to

detect negative status. We suggest 3.5–6 months as ideal timing during routine immunization visits. Retesting should be offered 6 weeks after cessation of breast feeding in all infants to confirm results. It is a useful supplement to PCR to detect negative status.

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**TABLE I** HIV RAPID TEST RESULTS ACROSS AGE BANDS

<i>Age band (mo)</i>	<i>Positive n(%)</i>	<i>Negative n(%)</i>	<i>Indeterminate n(%)</i>
1-3	3 (33)	4 (45)	2 (22)
4-6	5 (13)	27 (71)	6 (16)
7-9	0	9 (100)	0
9-12	0	8 (100)	0
>12	0	14 (100)	0
Total	8	62	8