RESULTS

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Serum samples were collected from 40 infants, 21 infants below 12 months of age (9-12), and 19 infants 15 months or older, just prior to inoculation of live further attenuated measles-virus vaccine. As shown in table,1 6 infants (2 belong to the first group, and 4 belong to the second group) had detectable measles ELISA antibody prior to vaccination. These infants were excluded from further study.

a) Results in Infants Vaccinated at <12 Months of Age:-

Serum samples were taken from 19 intans (12 males and 7 females), who were initially seronegative, 4 weeks after inoculation with live further attenuated measles-virus vaccine. The ages of these infants ranged between 270 and 350 days with a mean age 307 days (approximately 10 months).

Of the 19 infants 3 did not show demonstrable antibody 4 weeks after vaccination. The ages of these 3 infants were 270, 280, and 310 days, respectively.

As shown in **table 2.16** of the 19 infants studied have shown seroconversion. The seroconversion rate is shown to be 84.2%.

Table 3 shows the titer by age in 30 days interval. It can be noticed that infants >11 months of age at the time of vaccination tend to have higher titers than those vaccinated when less than 11-month-old. Also there are no serologic failures among infants >11 months of age.

Table 3 shows also that the lowest titer was 1:80 and the highest was 1:640 with a mean titer 1:183 (geometric mean titer = 1:216).

b) **Results in Children Vaccinated at ≥15 Months of Age**:-

This group consisted of 15 children (5 males and 10 females).

The ages ranged from 450 to 550 days with a mean age of 489 days. All of them were seronegative prior to vaccination. As shown in **table,3** all children belonging to this group have shown seroconversion four weeks after vaccination (100% seroconversion rate).

Table,4 does not show a tendency towards increased titer with increment of age at the time of immunizat-

ion beyond 15 months. The lowest titer among this group was 1:320 and the highest was 1:2650 with a mean titer 1:610 (geometric mean titer = 1:735).

As shown in **table,5** comparison between the mean titer of seroconvertors who were vaccinated before their first birth day and the mean antibody titer of those who received the vaccine at ≥15 months of age have shown that the later group had a higher mean titer and the difference is highly significant at 0.001 level of probability (P value <0.001).

Table 1: Results of ELISA test carried on pre-vaccination sera.

Age at vaccination	No. tested	No +ve at a titer of 1:40	No -ve at a titer of 1:40
< 12 month	21	2	19
⩾ 15 month	19	4	15
Total	40	6	34

Table 2: Prevalence of measles antibody 4 weeks after immunization by age at the time of vaccination.

Age at vaccination	No. positive / No. tested	% positive
< 12 months	16/19	84.2 %
⩾ 15 months	15/15	100 %

Table 3: Measles quantitative serologic response by age 4 weeks after vaccination of infants less than 12 months of age.

Age by 30 days interval	No. tested	No. with titer <1:40 (No. -ve)	No. with titer=1:80	No. with titer=1:160	No. with titer=1:320	No. with titer=1:640
270 - 300	7	2	2	3	-	-
301 - 330	5	1	-	3	1	-
>330	7	-	-	1	4	2
	Total number = 19					

Table 4: Measles quantitative serologic response by age 4 weeks after vaccination of infants ⩾15 month of age.

Age by 30 days interval	tested	No. with titer =1:320	No. with titer =1:640	No. with titer =1:1280	No. with titer =1:2560
450 - 480	6	2	1	3	-
481 - 510	5	-	3	1	1
>510	4	2	1	1	-
	Total number = 15				

Table 5: Comparison between the mean antibody titers in the 2 groups studied.

Age at the time of vaccination	Mean antibody titer	P value
< 12 months of age	1 : 183	< 0.001
⩾15 months of age	1 : 610	