

RESULTS

Antibody response to typhoid antigens in control subjects

Sub- ject	Age (months)	Sex	Anti H titre		Anti O titre	
			before im.	after im.	before im.	after im.
1	2	F	0	640	0	0
2	3	F	0	640	0	0
3	12	F	0	640	0	20
4	18	F	0	640	0	80
5	5	F	0	640	0	80
6	18	M	0	640	0	80
7	8	F	0	160	0	40
8	24	M	0	640	0	20
9	8	M	0	640	0	160
10	36	F	0	640	0	160
11	8	M	0	640	0	640
12	36	M	0	320	0	640
13	2	M	0	320	0	640
14	5	M	0	640	0	640
15	36	F	0	640	0	640
16	12	M	0	160	0	320
17	36	M	0	160	0	40
18	3	F	0	640	0	20
R a n g e			0	160-640	0	0-640
M e a n			0	524.44	0	234.44
± S.E.			0	46.32	0	63.59

Table (1)

Antibody response to typhoid antigens in malnourished
oedematous subjects

Sub- ject	Age (M)	Sex	Anti H titre		Anti O titre	
			before im.	after im.	before im.	after im.
1	8	M	0	20	0	20
2	12	M	0	80	0	40
3	18	M	0	0	0	0
4	18	F	0	80	0	0
5	7	F	0	0	0	0
6	24	M	0	40	0	20
7	3	F	0	0	0	0
8	4	F	0	0	0	0
9	3	F	0	80	0	40
10	8	F	0	40	0	0
R a n g e			0	0-80	0	0 - 40
M e a n			0	34	0	12
± S.E.			0	11.18	0	5.34

Table (2)

Antibody response to typhoid antigens in first
grade malnourished nonedemetic subjects.

sub- jects	Age (M)	Sex	Anti H titre		Anti O titre	
			before im.	after im.	before im.	after im.
1	3	F	0	20	0	0
2	4	F	0	160	0	20
3	7	F	0	80	0	0
R A N G E			0	20-160	0	0-20
M E A N			0	86.67	0	6.67
± S.E			0	41.32	0	6.79

Table 3

Antibody response to typhoid antigens in second
grade malnourished nonedematous subjects.

Sub- ject	Age (M)	Sex	Anti H titre		Anti O titre	
			before im.	after im.	before im.	after im.
1	3	M	0	0	0	0
2	24	F	0	0	0	0
3	6	F	0	160	0	40
4	18	M	0	80	0	20
5	4	M	0	160	0	0
6	24	F	0	80	0	40
7	6	F	0	0	0	0
8	5	M	0	40	0	40
9	13	M	0	160	0	20
R A N G E			0	0-160	0	0-40
M E A N			0	75.56	0	17.77
± S.E			0	23.52	0	6.19

Table (4)

Antibody response to typhoid antigens in third
grade malnourished nonedematous subjects.

Sub- ject	Age (M)	Sex	Anti H titre		Anti O titre	
			before im.	after im.	before im.	after im.
1	6	M	0	80	0	0
2	4	M	0	0	0	0
3	3	M	0	0	0	0
4	4	M	0	0	0	0
5	5	M	0	0	0	0
6	4	M	0	80	0	0
7	8	F	0	40	0	0
8	7	F	0	40	0	20
9	3	F	0	20	0	0
10	2	M	0	0	0	0
R A N G E			0	0—80	0	0—20
M E A N			0	26	0	2
± S.E			0	10.36	0	2

Table (5)

Statistical analysis of antibody response to typhoid antigens
in different groups of PEM as compared to control subjects

Group of subjects	Anti H titre	Anti O titre
(I) Controls		
M E A N	524.44	234.44
± S.E	46.32	63.59
(II) Edematous form of PEM		
M E A N	34	12
± S.E	7.76	5.34
t-value	<0.001	<0.05
p-value	H.S ↓	S ↓
(III) Non-edematous form of PEM		
M E A N	54.55	9.09
± S.E	12.68	3.14
t-value	10.66	3.92
p-value	<0.001	<0.01
Significance	H.S ↓	S ↓

Table (7)

Statistical analysis of antibody response to typhoid antigens in edematous group of PEM as compared to the non-edematous group

Group of subjects	Anti H titre	Anti O titre
1. Edematous group of PEM :		
M E A N :	34	12
± S.E :	11.18	5.33
2. Non-edematous group of PEM :		
M E A N :	54.55	9.09
± S.E :	11.59	2.46
t-value	1.008	0.49
p-value	>0.05	>0.05
Significance	N.S	N.S

Table (8)

Statistical analysis of antibody response to typhoid antigens in different grades of non-edematous group of PEM as compared to control subjects.

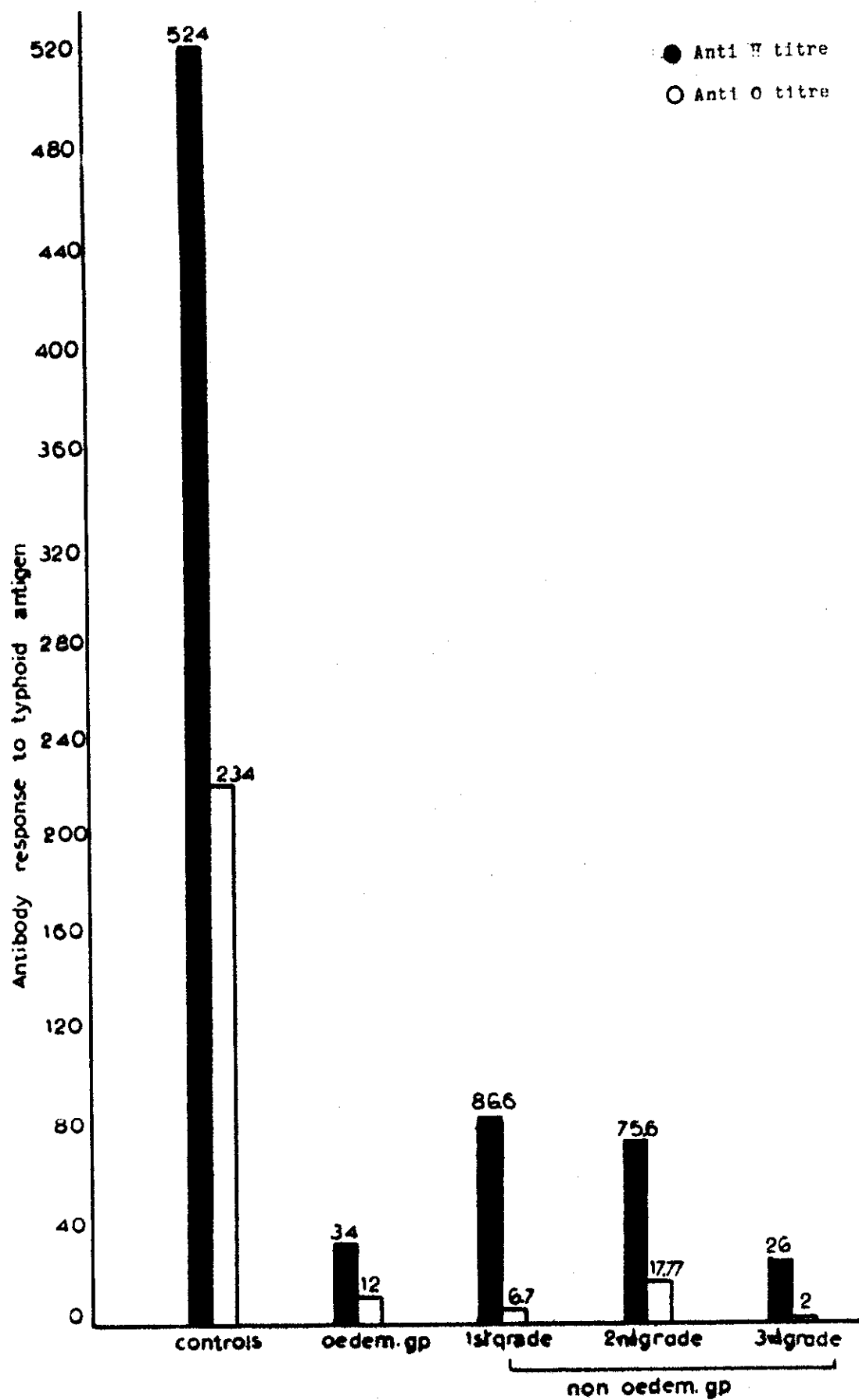
Group of subjects	Anti H titre	Anti O titre
I. Controls :		
M E A N :	524.4	234.4
± S.E	46.3	63.6
II. 1st grade non-edematous PEM		
M E A N :	86.67	6.67
± S.E :	41.32	6.79
t-value :	3.75	1.43
p-value :	<0.001	<0.05
Significance	H.S ↓	S ↓
III. 2nd grade nonedematous PEM		
M E A N :	75.56	17.77
± S.E :	23.52	6.19
t-value :	6.79	2.38
p-value :	<0.001	<0.05
Significance	H.S ↓	S ↓
IV. 3rd grade nonedematous PEM		
M E A N :	26	2
± S.E :	10.36	2
t-value :	7.9	2.7
p-value :	<0.001	<0.05
Significance	H.S ↓	S ↓

Table (9)

Statistical analysis of antibody response to typhoid antigens in the different grades of non-edematous group of PEM.

Group of subjects	Anti H titre	Anti O titre
1. 1st grade nonedematous subjects:		
M E A N :	86.67	6.67
± S.E :	41.32	6.79
2. 2nd grade nonedematous subjects:		
M E A N :	75.56	17.77
± S.E :	23.52	6.19
3. 3rd grade nonedematous subjects:		
M E A N :	26	2
± S.E :	10.36	2
t_{1-2}	0.24	0.96
p-value	>0.05	>0.05
Significance	N.S.	N.S.
t_{2-3}	2	2.54
p-value	<0.05	<0.05
Significance	S ↓	S ↓
t_{1-3}	2.19	0.94
p-value	<0.05	>0.05
Significance	S ↓	N.S

Table 10



RESULTS

(I) Normal control subjects : (Table I)

18 cases (9 females and 9 males) :

Anti H titer : it ranged from 160 to 640 with mean of 524.44
and S.E of ± 46.32

Anti O titre : it ranged from 0 to 640 with mean of 234.44
and S.E of ± 63.59

(2) Malnourished edematous subjects : (Table 2)

10 cases (4 males and 6 females) :

Anti H titer : it ranged between 20 - 80 with a mean of 34
and S.E of ± 11.18 .

Anti O titre : it ranged between 20 - 40 with a mean of 12
and S.E of ± 5.34

(3) 1st grade malnourished non edematous subjects :

3 female cases (Table 3)

Anti H titre : it ranged between 20 - 160 with a mean of 86.67
and S.E of ± 41.32

Anti O titre : it ranged between 0 - 20 with a mean of 6.67
and S.E of ± 6.79

(4) 2nd grade malnourished non edematous subjects :

9 cases : 5 males and 4 females (Table 4)

Anti H titre: it ranged between 40 - 160 with a mean of
75.56 and S.E of ± 23.52

Anti O titre: it ranged between 20 - 40 with a mean of 17.77
and S.E of ± 6.19

(5) 3rd grade malnourished non edematous subjects :

10 cases 7 males and 3 females (Table 5)

Anti H titre : it ranged between 0 - 80 with a mean of 26 and
S.E of ± 10.36

Anti O titre : it ranged between 0 - 20 with a mean of 2 and
S.E of ± 2 .

(6) Malnourished non edematous subjects :

22 cases 12 males and 10 females (Table 6)

Anti H titre : it ranged between 0 - 160 with a mean of 54.55
and S.E of ± 12.68

Anti O titre : it ranged between 0 - 40 with a mean of 9.09
and S.E of ± 3.14

Statistical analysis

(I) Comparison of edematous subjects with normal controls :
(Table 7)

The anti H titre is highly significantly lower than in controls ($p < 0.001$)

The anti O titre is significantly lower than in controls ($p < 0.05$)

(II) Comparison of non edematous subjects with normal controls (Table 7) :

Anti H titre is highly significantly lower than in controls ($P < 0.001$)

Anti O titre is significantly lower than in controls ($p < 0.05$)

(III) Comparison of non edematous subjects with edematous ones (Table 8) :

No significant difference is observed in both anti H and anti O titres .

(IV) Comparison of different grades of non-edematous subjects with normal controls (Table 9) :

In the 3 grades

The anti H titre is highly significantly lower than in controls ($p < 0.001$)

The anti O titre is significantly lower than in controls ($P < 0.05$)

(v) Comparison of 1st grade non edematous subjects with the 2nd grade (Table IO):

No significant difference is observed in both anti H and anti O titres .

(VI) Comparison of 2nd grade non edematous subjects with 3rd grade (Table IO):

Anti H titre is significantly lower in the 3rd grade than in 2nd grade.

Anti O titre is significantly lower in the 3rd grade than in 2nd grade

(VII) Comparison of 1st grade non edematous subjects with the 3rd grade (Table IO):

Anti H titre is significantly lower than in 1st grade

No significant difference is observed in the anti O titre .