RESULTS

Patients were classified into preschool (<6y) and school (6-12y) age group and the results were studied and statistically analysed as shown in the following tables.

Table (1): Distribution of 30 patients suspected clinically of enterica among preschool and school age groups.

Variable (age)	No. of cases		Mean	SD
	No.	%		
Preschool (< 6y)	9	30%	4.000	± 1.225
School (6-12y)	21	70%	9.2143	± 1.437
Total	30	100%		

t-test value = 9.49

The results showed that school age cases were more frequent than preschool ages cases.

The difference was not statistically significant

Table (2): Sex distribution of 30 patients suspected clinically of enterica in preschool and school age groups.

School	Sex		Row Total
	Male	Female	
Preschool	3 (33.3 %)	6 (66.7%)	9 (30.0%)
School	10 (47.6%)	11 (52.4%)	21 (70.0%)
Total	13 (43.3%)	17 (56.7%)	30 (100.0%)

$P > 0.05$

The results showed that females were more frequent than males in all age groups had studied. The difference was not statistically significant.

Table (3): Clinical symptoms of 30 patients suspected of Enterica.

Symptoms	No of patients						Chi-square	
	Preschool < 6y (9 cases)		School age 6-12 y (21 cases)		Total 30 (cases)		Value	Significance
	No.	%	No.	%	No.	%		
Fever	9	100	21	100	30	100	87912	0.34844
Headache	9	100	21	100	30	100	0.87912	0.34844
Anorexia	4	44.4	17	81.0	21	70	3.99849	0.04554*
Vomiting	1	11.1	5	23.8	6	20	0.63492	0.42556
General malaise	5	55.6	7	33.3	12	40	1.29630	0.23489
Dry cough	7	77.8	10	47.6	17	56.7	2.33355	0.12661
Vague abdo. Pain	8	88.9	18	85.7	26	86.7	0.5495	0.81467
Diarrhea	7	77.8	11	52.4	18	60	1.69312	0.19319
Constipation	2	22.2	10	47.6	12	40	1.691312	0.19319

- The results showed that fever and headache were present in all cases and vomiting was present in only 20% of cases.
- Anorexia is significantly increased in the school age than the preschool age children.
- Other symptoms were not significantly increased or decreased with age groups studied.

Table (4): Clinical signs of 30 patients suspected of enterica.

Symptoms	No of patients						Chi-square	
	Preschool < 6y		School age 6-12 y		Total		Value	Significance
	No.	%	No.	%	No.	%		
Coated tongue	9	100	21	100	30	100	-87912	0.34844
Toxic face	7	77.8	10	47.6	17	56.7	2.33355	0.12661
Chest rhonci	4	44.4	12	57.1	16	53.3	0.40816	0.52290
Abdominal tenderness	8	88.9	18	85.7	26	86.7	0.05495	0.81467
Splenomegly	5	55.6	11	52.4	16	53.3	0.02551	0.8310
Hepatomegly	3	33.3	6	28.6	9	30	0.06803	0.79423

Coated tongue was present in all studied cases and hepatomegly was present in only 30% of cases.

All clinical signs were not significantly decreased or increased in age groups studied.

Table (5): Results of PCR for salmonella in the studied groups.

		-ve PCR	+ve PCR	Row total
Preschool age	No	1	8	9
	%	11.1%	88.9%	30.0%
School age	No.	2	19	21
	%	9.5%	90.5%	70.0%
Column total	No.	3	27	30
	%	10.0%	90.0%	100.0%

P> 0.05

Out of the 30 studied patients 27 were +ve for salmonella by PCR i.e., 90% of cases. In the preschool age group (9 cases), 8 cases were +ve PCR for salmonella (88.9%) while in the school age group (21 cases), 19 cases were PCR +ve (90.5%). The difference was not statistically significant.

Table (6): Results of blood culture for salmonella in the studied groups.

		-ve Blood culture	+ve Blood culture	Row total
Preschool age	No.	7	2	9
	%	77.8%	22.2%	30.0%
School age	No.	12	9	21
	%	57.1%	42.9%	10.0%
Column total	No.	19	11	30
	%	63.3%	36.7%	100.0%

P > 0.05

Out of the 30 patients studied only 11 cases were +ve blood culture for salmonella (36.7%). In the preschool age group 2 cases out of 9 cases were +ve blood culture (22.2%) while in the school age group 9 cases out 21 cases were +ve blood culture (42.9%). The difference was not statistically significant.

Table (7): Results of Widal test (To) for salmonella typhi in the studied groups.

		-ve Widal test (To)	+ve Widal test (To)	Row total
Preschool age	No.	1	8	9
	%	11.1%	88.9%	30%
School age	No.	3	18	21
	%	14.3%	85.7%	70%
Column total	No.	4	26	30
	%	13.3%	86.7%	100%

$P > 0.05$

Out of the 30 studied cases 26 cases were +ve widal (To) (To ≥ 1/160) for salmonella typhi i.e., 86.7% of cases. In the preschool age group (9 cases), 8 cases were +ve widal test (To) for salmonella typhi (88.9%) while in the school age group (21 cases), 18 cases were widal test (To) +ve for salmonella typhi (85.7%). The difference was not statistically significant.

Table (8): Results of widal test (PA) for salmonella paratyphi A in the studied groups.

		-ve Widal test (PA)	+ve Widal test (PA)	Row total
Preschool age	No.	7	2	9
	%	77.8%	22.2%	30.0%
School age	No.	17	4	21
	%	81%	19%	70%
Column total	No.	24	6	30
	%	80%	20%	100%

P> 0.05

Out of the 30 studied cases 6 cases were +ve widal test (PA) for salmonella para typhi A i.e., 20% of cases. In the preschool age group (9 cases), 2 cases were +ve widal test (PA) for salmonella para typhi A (22.2%) while in the school age group (21 cases), 4 cases were widal test (PA) +ve for salmonella para typhi A (19%). The difference was not statistically significant.

Table (9): Results of widal test (PB) for salmonella para typhi B in the studied groups.

		-ve Widal test (PB)	+ve Widal test (PB)	Row total
Preschool age	No.	9		9
	%	100%		30%
School age	No.	19	2	21
	%	90.5%	9.5%	70%
Column total	No.	28	2	30
	%	93.3%	6.7%	100%

$P > 0.05$

Out of the 30 studied cases 2 cases were +ve widal test (PB) for salmonella para typhi B (6.7%). In the preschool age group (9 cases) no case was +ve widal test (PB) for salmonella para typhi B, while in the school age group (21 cases) 2 cases were widal test (PB) +ve for salmonella para typhi B (9.5%). The difference was not statistically significant.

Table (11): Results of P.C.R. for salmonella versus blood culture for salmonella in the studied patients.

Culture		PCR			
		-ve	+ve	Strong +Ve	Row Total
-ve Salmonella	No.	3	8	8	19
	%	15.8%	42.1%	42.1%	63.3%
+ve Salmonella typhi	No.		4		4
	%		100.0%		13.3%
+ve S. typhi & Para A	No.		2	4	6
	%		33.3%	66.7%	20.0%
+ve S. Para typhi B	No.			1	1
	%			100.0%	3.3%
Column Total	No.	3	14	13	30
	%	10.0%	46.7%	43.3%	100.0%

$P < 0.05$

- 19 cases (63.3%) out of all cases (30) were -ve blood culture for salmonella.
- 3 cases (15.8%) of them were -ve and 16 cases (84.2%) were +ve PCR for salmonella.
- 4 cases (13.3%) out of all cases (30) were +ve blood culture for *S. typhi* all of them were +ve PCR for salmonella.
- 6 cases (20%) out of all cases (30) were +ve blood culture for *S. para typhi A* all of them were +ve PCR for salmonella.
- One case only (3.3%) out of all cases (30) was +ve blood culture for *S. para typhi B* was also PCR +ve for salmonella.
- 36.7% of all cases (30) were +ve blood culture for salmonella all of them was +ve PCR for salmonella.

Comment on Table (12):

- ❖ It shows the results of blood culture, widal, (blood culture +widal) collectively and PCR for salmonella of 30 patients suspected clinically enterica.
- ❖ The results show only 11 cases (36.7%) blood culture +ve and 26 cases (86.7%) widal test +ve for salmonella.
- ❖ All 36.7% blood culture +ve were also widal test +ve for salmonella as they diagnosed enterica by (blood culture + widal test) collectively +ve for salmonella.
- ❖ All 36.7% of patients diagnosed enterica by (widal test + blood culture) collectively were also PCR +ve for salmonella.
- ❖ From the above data.
- ❖ The sensitivity of PCR for salmonella was 100%.

- ❖ The results show 19 cases (63.3%) blood culture -ve and only 4 cases (13.3%) widal test -ve for salmonella.
- ❖ All 13.3% widal test -ve were also blood culture -ve for salmonella as they diagnosed not Enterica by (Blood culture + widal test) collectively -ve for salmonella.
- ❖ Only 75% of patients diagnosed not Enterica by (widal test + blood culture) collectively were PCR -ve for salmonella.
- ❖ From the above data.
- ❖ The specificity of PCR was 75%.