

RESULTS

The study included 200 tonsillopharyngitis patients. Their aged ranged from 1.5 to 16 years (mean \pm SD = 7.605 \pm 3.892 years). The study also included 50 normal healthy children of same age and sex group. All the patients in the study group were subjected to full clinical examination (modified Centor score) throat culture and RADT to detect GABHS in the throat. The results of the study can be summarized in the following Tables (6 – 16) and Figures (1 – 11).

Table (6): Prevalence of positive culture (GABHS) among patients and control groups.

Group	Culture				Total		
	Positive		Negative				
	No	%	No	%	No	%	
Patients group	55	27.5	145	72.5	200	100	Z = 2.704 P = 0.0069 Significant
Control group	4	8	46	92	50	100	

This table shows that out of 200 patients, 55 (27.5%) were due to GABHS, compared to 4 out of 50 (8%) in the control group. A difference which is statistically significant.

Fig. (1) : Prevalence of GABHS positive culture among patients & control groups

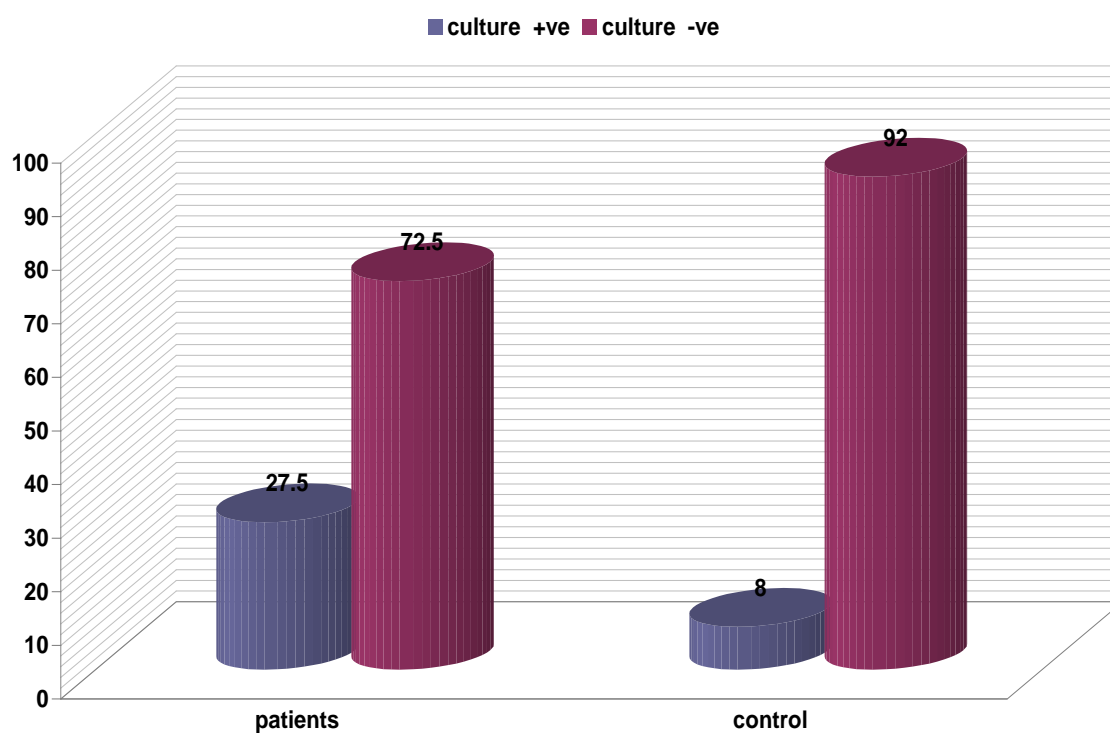


Table (7): Distribution of cases of GABHS pharyngitis (+ve culture) according to sex.

Sex	Culture				Total		
	Positive		Negative				
	No	%	No	%	No	%	
Male	27	27	73	73	100	100	Z = 0.158 P = 0.8742 insignificant
Female	28	28	72	72	100	100	
Total	55	27.5	145	72.5	200	100	

This table shows that out of 100 male patient, 27 (27%) had GABHS pharyngitis compared to 28 (28%) out of 100 female patients. The difference is statistically insignificant.

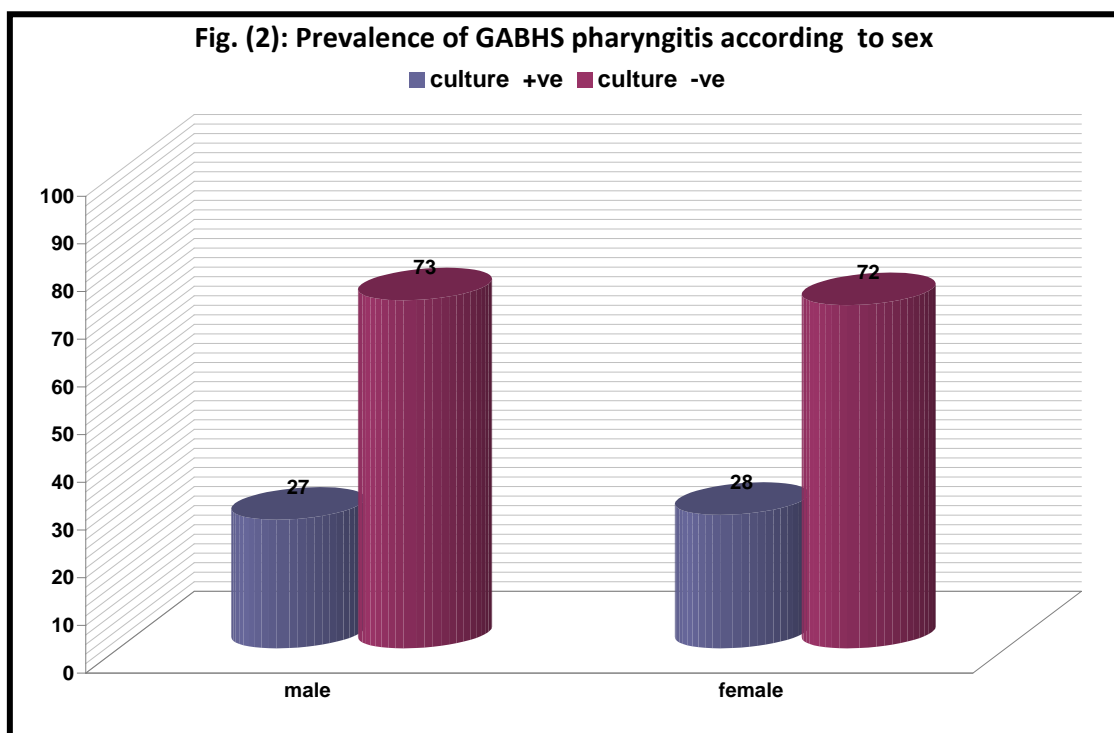


Table (8): Distribution of cases of GABHS pharyngitis (+ve culture) according to age groups.

Age (years)	Culture				Total		
	Positive		Negative				
	No	%	No	%	No	%	
< 3	1	5	19	95	20	100	X ² = 9.84 P = 0.020 Significant
3 -	16	27.59	42	72.41	58	100	
6 -	29	37.18	49	62.82	78	100	
11 – 16	9	20.45	35	73.55	44	100	
Total	55	27.5	145	72.5	200	100	

This table shows that GABHS pharyngitis was more common in age 6 to less than 11 y (37.18%) followed by age group 3 to less than 6 y (27.59%), and least in the group < 3 years (5%).

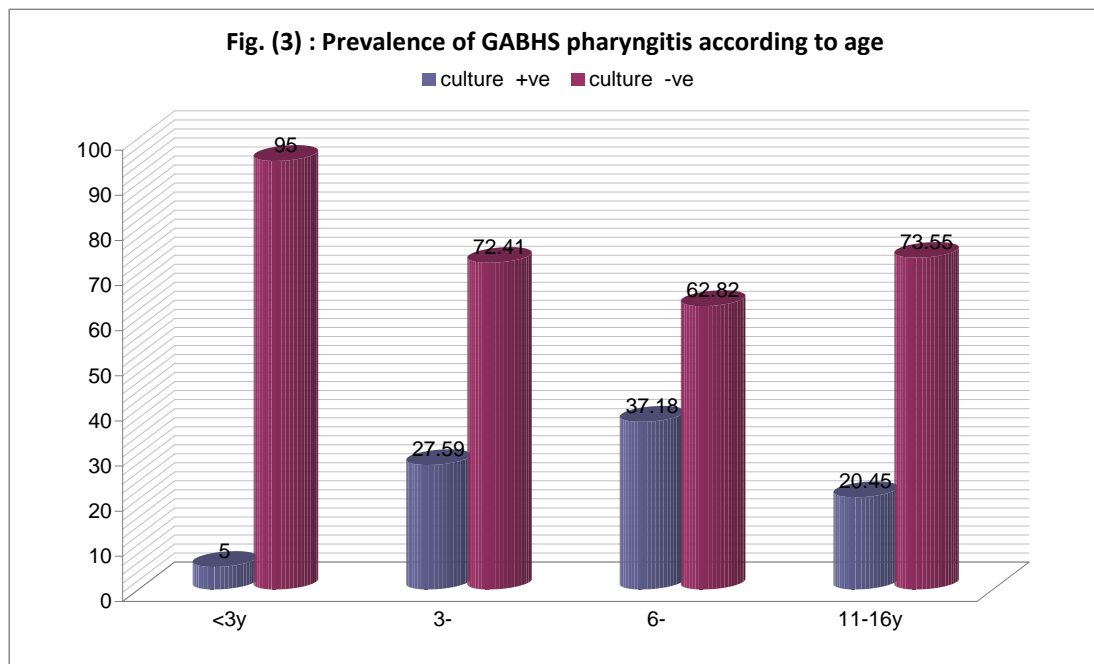


Table (9): Distribution of cases of GABHS pharyngitis (+ve culture) according to residence.

Residence	Culture				Total		
	Positive		Negative				
	No	%	No	%	No	%	
Rural	40	33.1	81	66.9	121	100	Z = 2.155
Urban	15	18.99	64	81.01	79	100	P = 0.0312
Total	55	27.5	145	72.5	200	100	significant

This table shows that out of 121 patients from rural areas 40 (33.1%) were due to GABHS compared to 15 (18.99%) out of 79 patients from urban areas. The difference is statistically significant.

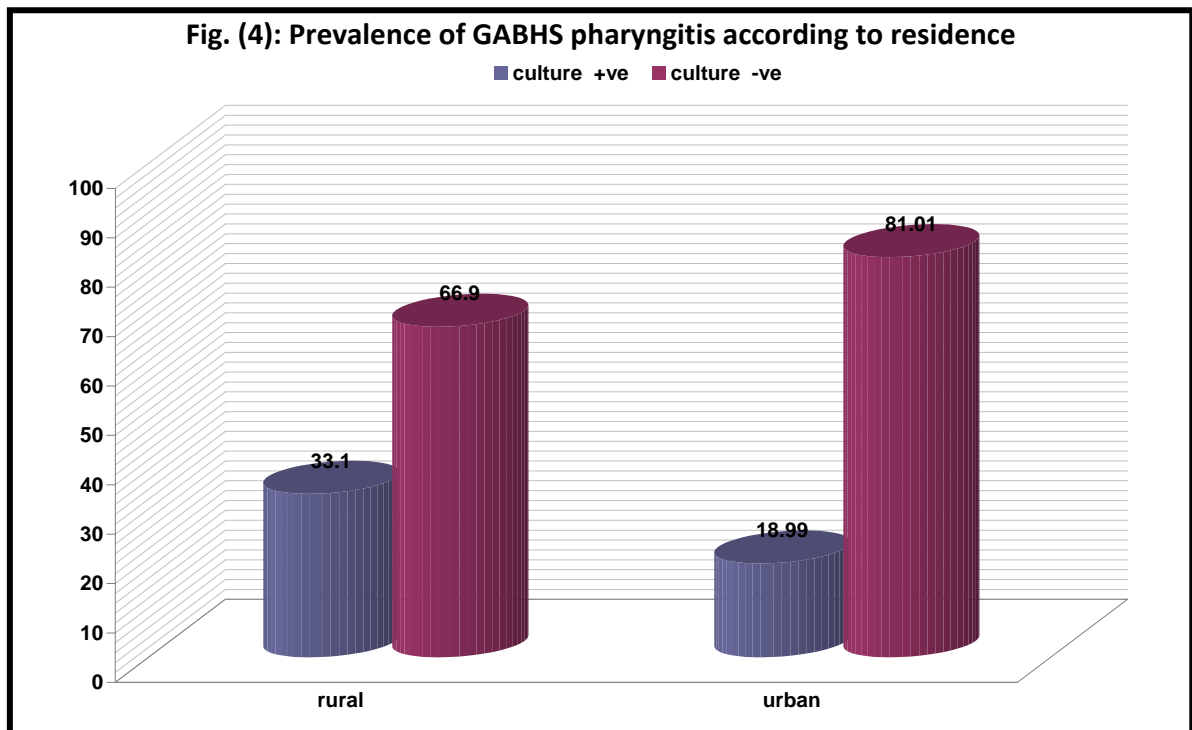


Table (10): Distribution of cases of GABHS pharyngitis (+ve culture) according to the season.

Season	Culture				Total		
	+ ve		- ve				
	No	%	No	%	No	%	
Winter	32	34.41	61	65.59	93	100	X ² = 8.26 P = 0.041 Significant
Spring	18	28.57	45	71.43	63	100	
Summer	1	6.67	14	93.33	15	100	
Autum	4	13.72	25	86.21	29	100	
Total	55	27.5	145	72.5	200	100	

This table shows that GABHS pharyngitis was common in winter (34.41%) and spring (28.57%) but less common (rare) in summer (6.67%). The difference is statistically significant.

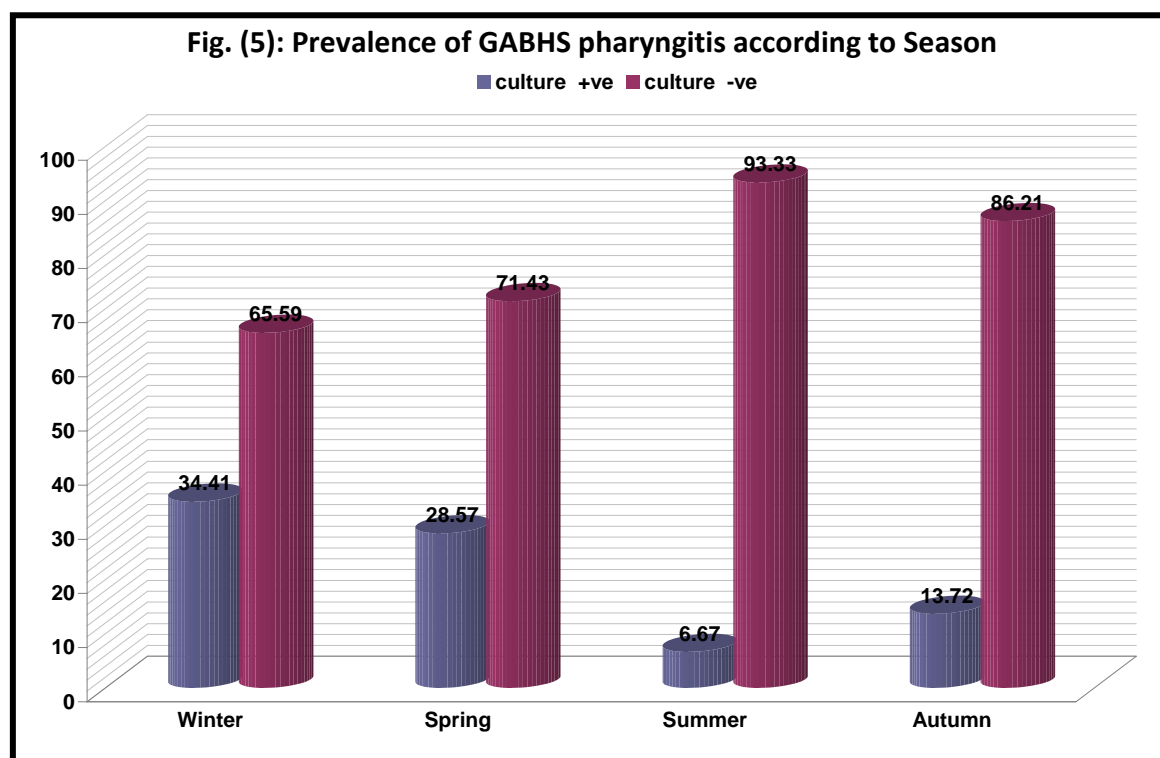


Table (11): Sensitivity and specificity of RADT compared with throat culture (standard test).

Standard test Screening test		Throat culture		
		+ve	-ve	Total
RADT	+ ve	49	5	54
	- ve	6	140	146
	Total	55	145	200

Sensitivity = 89.09%

Specificity = 96.55%

Positive predictive value (PPV) = 90.74%

Negative predictive value = 95.89%

Table (12): Relation between clinical score and the number of positive throat culture.

Clinical score	Total number		+ve culture	
	No.	%	No.	%
2	59	29.5	7	11.86
3	69	34.5	16	23.19
4	42	21	17	40.48
5	30	15	15	50
Total	200	100	55	27.5

This table showed that the number of positive throat culture increases as the total score increases (from 11.86% in score 2 to 50% in score 5).

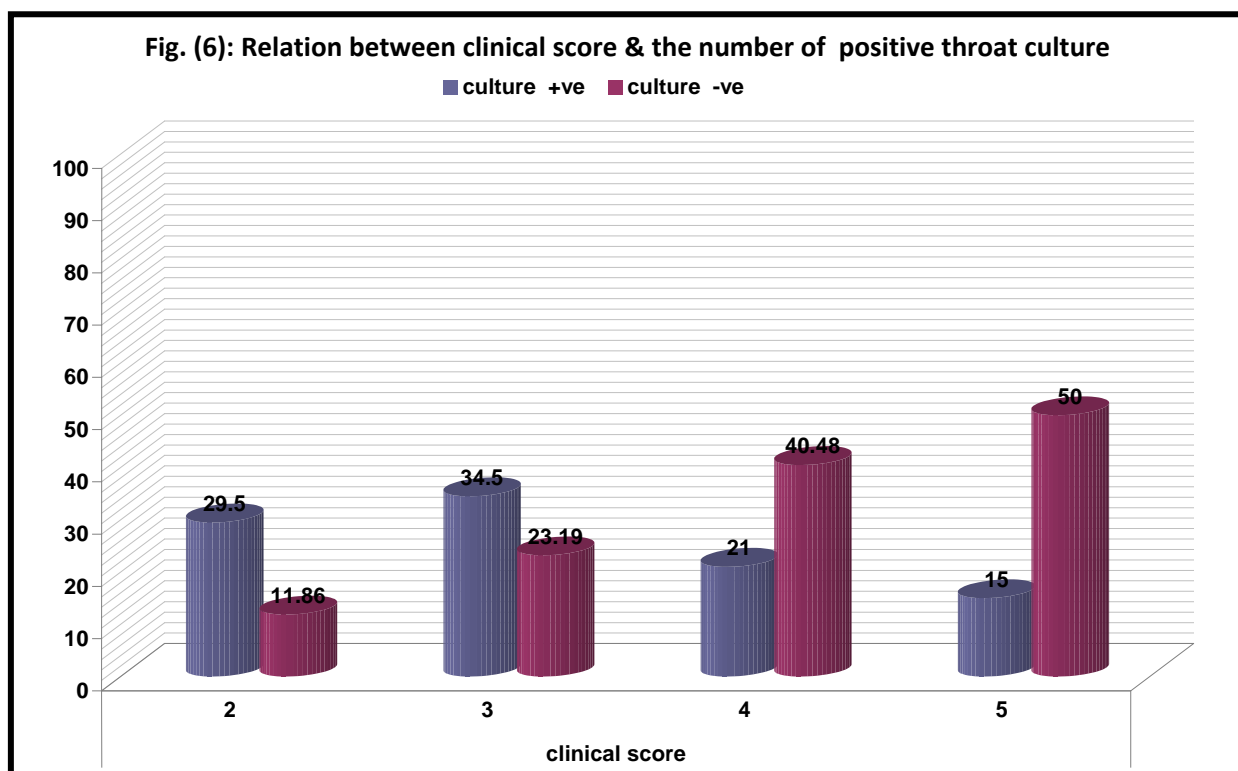


Table (13): Distribution of cases of GABHS pharyngitis according to symptoms.

	Total number		GABHS culture			
			+ ve		- ve	
	No	%	No	%	No	%
Fever :						
Yes	150	75	40	26.67	110	73.33
No	50	25	15	30	35	70
Total	200	100	55	27.5	145	72.5
Z = 0.457 P = 0.6478						
Sore throat						
Yes	118	59	32	27.12	86	72.88
No	82	41	23	28.05	59	71.95
Total	200	100	55	27.5	145	72.5
Z = 0.145 P = 0.8848						
Cough						
No	114	57	31	27.19	83	72.81
Yes	86	43	24	27.91	62	72.09
Total	200	100	55	27.5	145	72.5
Z = 0.112 P = 0.9109						
Enlarged cervical L.glands						
Yes	48	24	23	47.92	25	52.08
No	152	76	32	21.05	120	78.95
Total	200	100	55	27.5	145	72.5
Z = 3.530 P = 0.0004						
Recent contact						
Yes	80	40	35	43.75	45	56.25
No	120	60	20	16.67	100	83.33
Total	200	100	55	27.5	145	72.5
Z = 4.080 P = < 0.0001						

P < 0.05 = Significant

P > 0.05 = insignificant

Table (14): Distribution of cases of GABHS pharyngitis according to tonsillar and pharangeal signs.

Sign	Total number		GABHS culture			
			+ ve		- ve	
	No	%	No	%	No	%
Enlarged congested tonsils						
Yes	98	49	9	9.18	89	90.82
No	102	51	46	45.10	56	54.90
Total	200	100	55	27.5	145	72.5
Z = 5.205 P = < 0.0001						
Tonsillar exudate						
Yes	49	24.5	25	51.02	24	48.98
No	151	75.5	30	19.87	121	80.13
Total	200	100	55	27.5	145	72.5
Z = 4.088 P = < 0.0001						
Follicular tonsillitis						
Yes	53	26.5	21	39.62	32	60.38
No	147	73.5	34	23.13	113	76.87
Total	200	100	55	27.5	145	72.5
Z = 2.279 P = 0.0227						
Pharyngeal exudate						
Yes	88	44	38	43.18	50	56.82
No	112	56	17	15.18	95	84.82
Total	200	100	55	27.5	145	72.5
Z = 4.252 P = < 0.0001						

P < 0.05 = Significant

P > 0.05 = insignificant

Table (15): Distribution of cases of GABHS pharyngitis according to other signs

	Total number		GABHS culture			
			+ ve		- ve	
	No	%	No	%	No	%
Watery eye (conjunctivitis)						
Yes	28	14	4	14.29	24	85.71
No	172	86	51	29.65	121	70.35
Total	200	100	55	27.5	145	72.5
Z = 1.641 P = 0.1007						
Running nose						
Yes	30	15	5	16.67	25	83.33
No	170	85	50	29.41	120	70.59
Total	200	100	55	27.5	145	72.5
Z = 1.417 P = 0.1565						
Tender cervical L. glands						
Yes	64	32	22	34.38	42	65.62
No	136	68	33	24.26	103	75.74
Total	200	100	55	27.5	145	72.6
Z = 1.487 P = 0.1370						

P < 0.05 = Significant

P > 0.05 = insignificant

Table (16): Significant predictors of GABHS pharyngitis.

Model	Odds Ratio (OR)	Confidence interval (95%)	
		Lower	Upper
Recent contact with tonsillopharyngitis case	3.8889	2.0253	7.4672
Enlarged cervical L. glands	3.45	1.7346	6.8616
Tonsillar exudate	4.2014	2.1112	8.3608
Follicular tonsillitis	2.1811	1.1152	4.2657
Pharyngeal exudates	4.2471	2.1807	8.2715
Tender cervical L.glands	1.6349	0.8553	3.1252



Fig. (7): Blood agar plate



Fig. (8): Blood agar plate showing beta (complete) hemolysis.



Fig.(9): Streptococcus group A stained with Gram stain

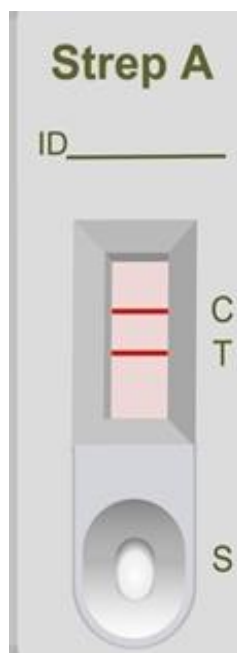


Fig.(10): Positive RADT for GABHS



Fig.(11): Negative RADT for GABHS