V. RESULTS

The bacteria isolated from 50 cases of chronic muco-purulent rhinorrhea are listed in table III.

Although 67 bacteria were found, 38 were aerobic or facultative corresponding to 56.7 % of the total isolates. Most isolates were present in large numbers, which indicate their proliferation.

On the other hand 29 were strictly anaerobic corresponding to 43.2 % of the total.

Tables IV and V shows the percentage of isolated organisms in this study.

In Vitro Susceptibility of Obligate Anaerobes to Different Antimicrobial Drugs:

As shown in table VI all strains of bacteroid species are sensitive to metronidazole, while 70 % only are sensitive to Rimactan and Negram.

Concerning anaerobic strepto cocci 81.8 % are sensitive to metronidazole, while 36 % are sensitive to Rimactan and 27 % to Negram.

Results of Control Cases

10 children are selected from out-patient clinic of the University Paediatric Hospital. Their age group range from 10 Month - 10 years five of these are males and five are female there was no history of chronic nasal complaint.

Specimens were taken by swab from the nose, then the serial are subjected for anaerobic study. However, no of anaerobic are detected in all the 10 cases as shown in table VII.

Table I : Personal history of 50 cases of chronic muco-parulent rhinorrhea

Serial No.	O.P. Card No.	Name	Age	Sex	Residence	Assosiated symptoms	Previous treatment		Previous operation	
							Local	Systemic	Adenoidectomy	Tonsillectomy
1	220	M.A. Said	2 Y	M	Basatin		✱			
2	224	F.M. Ragab	10 M	F	Abo Attata	Asthmatic attacks	-			
3	229	I.R. Salem	4.5 Y	F	Nazlet Seman		✱	x		
4	235	M.F. Saleh	3 Y	M	Sakiat Meky	Cough				
5	280	H.M. Radi	5 Y	F	Embabah		✱	0	+	+
6	300	M.M. Khalil	3 Y	F	Giza		✱			
7	317	R.B. Moustafa	1.5 Y	F	Abou Attata	Cough				
8	333	D. Zakareya	10 M	F	El-Fostat	Gastro-enteritis				
9	412	M.S. Ali	10 Y	M	Dar El-Salam		✱	x	+	+
10	413	A. Khamis	1 Y	F	Nazlet Seman	Earache				
11	481	G.A. Lotfi	3 Y	M	Giza		✱	x		
12	487	N. Maged	10 M	F	Embaba					
13	493	T. Saleh	3 Y	F	Boulak	Lack of appetite	✱	x		
14	531	F.F. Tawfic	2 Y	F	El-Goreya	Gastro-enteritis				
15	537	B. Sharaf	5 Y	F	El-Kalaa		✱	x		+

Table I : (Cont.)

Serial No.	O.P. Card No.	Name	Age	Sex	Residence	Assosiated symptoms	Previous treatment		Previous operation	
							Local	Systemic	Adenoidectomy	Tonsillectomy
16	588	A. Abd Allah	10 M	M	Zeinhom					
17	590	Y.L. Moussa	2 Y	M	Kitkat	Gastro-enteritis				
18	811	A. Gamil	10 Y	M	El-Talbeya	Asthmatic attacks	*			
19	815	S.N. Salama	10 Y	M	Boulak	Earache	*		+	+
20	876	F.F. Borai	10 Y	F	El-Helmeya		*	0	+	+
21	943	M. Gaber	10 Y	M	El-Sayeda	Ear discharge		0	+	+
22	954	S. Abas	9 Y	F	El-Hesaneya	Frequent cold	*		-	+
23	966	F.M. Darwish	9 Y	F	El-Ghafir	Cough.	*	x	+	+
24	981	M.M. Arafa	6 Y	F	Helwan		-		-	
25	983	H. Hassib	8 Y	M	El-Monira	Ear discharge	*	x		+
26	1017	D. Aboud	4 Y	F	Abou Attata	Asthmatic attacks		x		+
27	1085	M.A. Fatouh	8 Y	M	Giza		*	x	+	+
28	1086	S.El-Alfi	1.5 Y	F	El-Talbeya	Cough				
29	1089	M.S. Daoud	8 Y	M	El-Fostat		*	x	+	+
30	1112	K.A. Sayed	14 M	M.	Boulak		-		-	
31	1128	M. Sami	10 Y	M.	EEl-Sayeda	Ear discharge	*	0	+	+
32	1311	S.M. Farouk	1 Y	M.	Embaba		-			

Table I : (Cont.)

Serial No.	O.P. Card No.	Name	Age	Sex	Residence	Assosiated symptoms	Previous treatment		Previous operation	
							Local	Systemic	Adenoidectomy	Tonsillectomy
33	1322	T. Mounir	2.5 Y	M	Nazlet Seman	Cough				
34	1335	R.M. Ashour	10 M	F	El-Kolali					
35	1387	M.M. Ahmed	20 M	F	Dar El-Salam	Gastro-enteritis				
36	1422	A. Hana	3 Y	M	Sakiet Meky	Lack of appetite	x	x		
37	1423	F.A. Morad	4 Y	M	Ken Kalili	Asthmatic attacks		x	+	+
38	1430	H. Rashed	8 Y	F	Zeinhom		x	x		+
39	1466	M.F. Mohamed	8 Y	M	Kitkat	Frequent cold	x			+
40	1498	H. Galal	10 Y	M	Basatin	Gastro-enteritis	x	0	+	+
41	1590	A.A. Samir	20 M	M	El-Imam	Gastro-enteritis				
42	1591	D. Mahmoud	2 Y	F	El-Helmeya					
43	1608	K. Yehya	2 Y	M	El-Sayeda	Earache				
44	1609	S. El-Tawil	4 Y	M	Helwan			x	+	+
45	1627	A.H. Tohami	6 Y	M.	El-Fostat	Cough.	x			+

Table I : (Cont.)

Serial No.	O.P. Card No.	Name	Age	Sex	Residence	Assosiated symptoms	Previous treatment		Previous operation	
							Local	Systemic	Adenoidectomy	Tonsillectomy
46	1637	W. Boulos	7 Y	F	El-Ghafir		✱	x	+	+
47	1670	S. Maher	6 Y	M	El-Monira	Asthmatic attacks		0	+	+
48	1671	A. Fahim	5 Y	F	El-Helmeya					
49	1685	M.M. Anwar	10 Y	M	El-Kolali	Ear discharge	✱	0		+
50	1693	R.H. Kalifa	10 Y	M	Embaba		✱	x		+

✱ Nasal drops

0 Repeated Antibiotic according to culture and sensitivity

x Non-specific Antibiotic

Table II : Clinical study of 50 cases of chronic muco-purulent rhinorrhea

Serial No.	Duration			Site			Colour			Amount		Consistency			Odour		Assosiated signs
	Weeks	Months	Years	Unilateral	Bilateral	Post-nasal	Yellowish	Whitish	Greenish	Profuse	Scanty	Mucoid	Muco-purulent	Purulent	Foetid	Non-Foetid	
1		+		+				+		+		+				+	
2		+			+			+		+		+			+		Chest wheezes
3		+			+		+				+	+				+	A.L. Tonsillitis
4		+			+					+						+	
5			+		+	+		+		+		+				+	
6		+		+			+	+		+		+			+		
7	+			+					+		+			+	+		Exocoriation of lip
8	+				+		+			+			+		+		
9	+				+			+		+		+				+	
10		+				+	+				+	+				+	
11	+				+			+			+	+				+	Exocoriation of lip
12		+				+				+					+		
13	+				+			+		+		+				+	A.F. Tonsillitis
14	+				+				+		+			+	+		
15		+			+		+			+			+		+		

Table II : (Cont.)

Serial No.	Duration			Site			Colour			Amount		Consistency			Odour		Assosiated signs
	Weeks	Months	Years	Unilateral	Bilateral	Post-nasal	Yellowish	Whitish	Greenish	Profuse	Scenty	Mucoid	Muco-purulent	Purulent	Foetid	Non-foetid	
16		+				+	+				+		+			+	
17		+			+			+		+		+				+	
18		+			+		+			+		+		-	+	-	Chest wheezes
19			+	+			+			+			+		+		
20		+				+		+		+		+			-	+	
21			+			+			+	+				+	+		C.S.O.M.
22			+			+	+			+			+			+	
23			+		+		+				+		+		+		
24			+		+		+			+				+	+		A.F. Tonsillitis
25			+		+				+	+	-	+			+		C.S.O.M.
26		+				+		+		+		+				+	Chest wheezes
27			+			+	+			+			+			+	
28	+				+				+		+			+	+	-	Excoriation flip
29			+			+	+			+			+		+		
30	+				+			+		+		+				+	

Table II : (Cont.)

Serial No.	Duration			Site			Colour			Amount		Consistency			Odour		Assosiated signs
	Weeks	Months	Years	Unilateral	Bilateral	Post-nasal	Yellowish	Whitish	Greenish	Profuse	Scanty	Mucoid	Muco-purulent	Purulent	Foetid	Non-foetid	
31			+			+	+			+			+			+	C.S.O.M.
32		+			+			+		+		+			+		
33		+			+		+			+			+		+		Chest wheezes
34	+				+				+		+			+	+		Exocoriation of lip
35	+			+				+			+	+				+	
36		+			+			+		+		+				+	A.F.Tonsilitis
37		+			+		+			+			+			+	Chest wheezes
38			+			+	+				+			+		+	
39			+			+	+			+			+			+	
40			+		+			+		+		+				+	
41	+				+			+			+	+				+	
42	+					+	+			+				+	+		Exocoriation of lip
43	+			+			+				+		+		+		
44		+				+			+		+			+		+	
45		+			+			+		+			+			+	Chest wheezes

Table II : (Cont.)

Serial No.	Duration			Site			Colour			Amount		Consistency			Odour		Assosiated signs
	Weeks	Months	Years	Unilateral	Bilateral	Post-nasal	Yellowish	Whitish	Greenish	Profuse	Scanty	Mucoid	Muco-purulent	Purulent	Foetid	Non-foetid	
46		+			+		+				+			+	+		
47			+		+			+		+		+				+	Chest wheezes
48		+			+			+		+		+				+	A.F. Tonsillitis
49			+	+			+			+				+	+	+	C.S.O.M.
50		+				+		+			+	+				+	

Table III: Showing individual bacteriological results of patients with chronic muco-purulent rhinorrhea for aerobic and anaerobic orgainsms.

Serial No.	O.P. card No.	Aerobic Organisms	Anaerobic Organisms
1	220	Staph. aureus/D. Pneumonia	Bacteroid fragilis
2	224	Strept. haemolyticus/Staph. albus	gr + ve Cocci/Bacteroid species
3	229	Staph. albus/Strept. haemolyticus	Absent No growth
4	235	Staph. albus/D. pneumonia	No growth
5	280	D. pneumonia	Bacteroid species
6	300	No growth	Anaerobic strept./ Bacteroid species
7	317	E. coli/Staph. aureus	No growth
8	333	D. pneumonia/Staph. aureus	gr + ve Spore forming bacilli
9	412	Ps. pyocyanea/Strept. haemolyticus	Bacteroid fragilis
10	413	No growth	No growth
11	481	Staph. aureus	No growth
12	487	No growth	Anaerobic strept.
13	493	E. coli/Staph. albus	Bacteroid fragilis
14	531	St. facalis	No growth
15	537	No growth	Anaerobic strept.
16	588	No growth	Clostridium species/Bacteriods species
17	590	D. pneumonia	No growth
18	811	No growth	Anaerobic strept.
19	815	Strept. haemolyticus/ H. infleunza	Bacteroid species
20	876	D. pneumonia	No growth
21	943	H. infleunza/D. pneumonia	Anaerobic strept./Clostridium species
22	954	Staph. aureus/Ps. pyocyanea	No growth
23	966	E. coli/D. pneumonia	Bacteroid species
24	981	H. infleunza/Staph. aureus	Anaerobic strept./Clostridium species
25	983	E. coli/H. infleunza	No growth

Table III: (Cont.)

Serial No.	O.P. card No.	Aerobic Organisms	Anaerobic Organisms
26	1017	Strept. haemolyticus	No growth
27	1085	D. pneumonia	No growth
28	1086	No growth	Anaerobic gr + ve cocci
29	1089	H. infleunza/D. pneumonia	No growth
30	1112	Staph. aureus	No growth
31	1128	E. coli/Strept. haemolyticus	No growth
32	1311	gr - ve bacilli	Bacteroid species
33	1322	No growth	Anaerobic strept.
34	1335	E. coli/Staph. aureus	Anaerobic strept.
35	1387	Strept. haemolyticus/H. infleunza	Bacteroid species
36	1422	H. infleunza	No growth
37	1423	No growth	Bacteroid fragilis
38	1430	E. coli	Anaerobic strept.
39	1466	Staph. albus	No growth
40	1498	D. pneumonia	Bacteroid species/Anaerobic strept.
41	1590	Staph. aureus	No growth
42	1591	No growth	Anaerobic gr + ve cocci
43	1608	No growth	Clostridium species
44	1609	D. pneumonia	Bacteroid fragilis
45	1627	Strept. haemolyticus	No growth
46	1637	D. pneumonia/Staph. albus	Clostridium species
47	1670	H. infleunza	No growth
48	1671	No growth	Anaerobic strept.
49	1685	E. coli	No growth
50	1693	H. infleunza/Staph. aureus	Gr + ve spore forming bacilli

Table IV : The percentage of isolated anaerobic organisms in chronic muco-purulent Rhinorrhea.

Organisms	Total No. of isolates	Percentage %
Anaerobic bacteria	29	
Bacteroid species	13	44.4
Anaerobic strept.	11	37.9
Clostridium species gr + ve spore forming ba.	7	24.1
gr + ve cocci	3	10.3

Table V : The percentage of aerobic organisms in chronic muco-purulent rhinorrhea.

Organisms	Total No. of isolates	Percentage %
Specific Types Strain	38	
Staph. aureus	11	28.9
" albus	5	13.1
D. Pneumonia	13	34.2
H. Infleunza	9	23.6
E. Coli	8	21.5
St. Haemolytious	8	21.5
Ps. Pyocyanea	2	

Table VI : In-Vitro sensitivity tests for anaerobes isolated to different antibiotics

Types of organisms	Total No. of strain tested	Antibiotic used (ug/disc)									
		Metronidazole		Rimactan		Negram		Penstaph		Cloxacillin	
		No+ve	%	No+ve	%	No+ve	%	No+ve	%	No+ve	%
Bacteroid species	13	13	100.0	9	70.0	9	70	5	38.2	6	46.0
Anaerobic strept.	11	9	81.8	4	36.0	3	27	1	00.9	2	18.0
Gr + ve spore forming bacilli	6	4	66.6	2	33.3	-	--	-	----	2	33.3

Table VII: Results of control cases

Serial No.	O.P. card No.	Aerobic	Anaerobic
1	1016	D. Pneumonia + H. Infleunza	No growth
2	1022	Staph. aureus	"
3	1033	St. haemolyticus + D. Pneumonia	"
4	1050	H. Infleunza + E. Coli	"
5	1115	Strept. haemolyticus + H. infleunza	"
6	1594	D. Pneumonia + Ps. Pyocyan	"
7	1598	Strept. haemolyticus + Staph. aureus	"
8	1625	D. Pneumonia + Staph. albus	"
9	1673	Staph. aureus + H. infleunza	"
10	1704	Strept. haemolyticus + E. coli.	"