Otitis Media Prospective Clinical Study

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INTRODUCTION

SUP OTITIS MEDIA is inflamation of the middle ear cleft, it may be acute or chronic according to the duration and pathological changes of the middle ear. This infection is common in children, one in ten has an attack Otitis Media and 10 % of those who has one attack are liable to have another attack. If treated properly it is easy to cure. If neglected, its complications are major and may be fatal.

Intra Cranial

1. Myiasis
2. Extradural abscess
3. Subdural abscess
4. Meningitis
5. Venous Sinus thrombophlebitis
6. Otitis Hydrocephalus
7. Brain abscess

Extr-Cranial

1. Mastoiditis
2. Labyrinthitis
3. Facial Palsy
4. Petrositis

If treated inadequately, such as :-

1. Not sufficient antibiotic
2. Not the right ear drops
3. Aural Toilet is not done while it is needed
4. The primary cause of the condition has not been treated

The sequalae for those children treated inadequately are disruptive to normal life and education.

a. Deafness and consequently education backwardness.

b. Speech development is not as good as it should be.

c. Psychiatric deviation due to deafness.

d. Aggressive behavior due to lack of proper communication with the teacher and his friends at school.

Suppurative Otitis Media is distributed world wide and it is common in developing Countries. It is common in Bahrain that is why this study been designed to review most of the predisposing factors and complication of Otitis Media.

I met with Mr. A.R. Zayani to produce a computarised form which is going to be filled during the interview of those patients affected.

We met with :

Mr. Sadiq Shehabi
Dr. J. Thaddeus
Dr. Armenian
Prof : Huda Zurayk (A.U.B.)

After several meetings it was thought that to get any valuable result we ought to see a minimum of 200 patients. We have completed 290 forms and the result drawn for these by using the Sortor System.

The hundred control drawn from Paediatric clinic in Naim Health Centre. Those patients in the control are suffering from diseases other than Otitis Media. The parents are asked the same question as the Otitis Media study.

METHOD USED ON DATA PREPARATION

It was found that the use of the Computer was not necessary because of the simplicity of the Data.

The present machine (The Sortor) which exist in the Computer Section was used to aid this operation.

The stages covered were as follows :-

1. The forms were handed over to the Computer Department.
2. Data preparation section of the Computer Department, transferred these forms into punched cards.
3. These cards were then sorted on the Sortor and 11 out of the 12 required tables were produced.
4. The last table was produced by the use of a manual Sortor, which is done by the Computer Section.

Table No. 1 :- Frequency and Percentage Distribution of Cases and Controls by Sex

Sex	Case		Control
	No.	%	No. (%)
Male	157	54.1	65
Female	133	45.9	35
Total	290	100	100

We can see from this that there is a little Male predominence.

Table No. 2 :- Frequency and Percentage Distribution of Cases and Controls by Age

Age	Case		Control
	No.	%	No. (%)
Under 1 Year	59	20.8	19
1 - 2	112	38.6	32
3 - 4	55	19.0	17
5 - 6	26	9.0	16
7 - 8	22	7.6	9
9 - 10	9	3.1	7
11 - 12	7	2.4	0
Total	290	100	100

We can deduce from this table that the incidences of Otitis Media in this series, most commonly occur from Birth to the fourth year. This is comparable also to the figures obtained in U.S.A. and Britain. We can see that as age increases the incidences of Otitis Media decline.

In the control the same result has been obtained with other diseases. (due to infection).

Table No. 3 Frequency and Per-

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centage Distribution of Cases and Controls by Nationality

Nationality	Case		Control
	No.	%	No. (%)
Bahraini	278	95.9	92
Non-Bahraini	9	3.1	8
Blank	3	1.	
Total	290	100	100

This does not indicate that the Bahrainis are more prone to Sup Otitis Media than Non-Bahraini, but it reflects the Residence proportionally.

Table No. 4 Frequency and Percentage Distribution of Cases and Controls by Guardian's Occupation

Guardian's Occupation	Case		Control
	No.	%	No. (%)
Unemployed	65	23	Labour 33
Driver	39	13.8	Driver 14
Farmer	25	8.8	Porter 3
Clerk	14	4.9	Farmer 3
Porter	55	19.5	Clerk 3
Cargo Labour	13	4.6	Techni - cians 15
Electric-Fitter	11	3.9	Policeman 6
Others	60	21.2	Others 23
Total	282	100	100

Jobs are not included because they are not classified. It is clear here that children from low socio-economic group are more prone to Sup Otitis Media. This is also Comparable with other disease in the same age group in the control series.

Table No. 5 Frequency and Percentage Distribution of Cases and Controls by Place of Residence

Place of Residence	Case		Control
	No.	%	No. (%)
Isa Town	13	4.6	Control drawn from Manama Population
Manama	51	18.2	
Al-Khamis	19	6.7	
Muharraq	16	5.7	
Jidhafs	13	4.6	
Sanabis	10	3.5	
Karrana	14	5	
Diraz	14	5.3	
Budaia	25	8.9	
Karzakkan	13	4.6	
Rifa'a	8	2.8	
Others	23	8.2	
Total	280	100	

This table showes the prevalence of the diseases in certain areas of Bahrain and it showes also the incidence according to the population in the area.

The prevalence of the diseases in certain area should be studied in detail in the future.

Table No. 6 Frequency and percentage Distribution of Cases and Controls by Size of Nuclear Family

Size of Nuclear Family	Case		Control
	No.	%	No. (%)
Less than 2	1	34	
3 - 5	94	32.4	45
6 - 8	112	38.63	34
9 and above	83	28.63	21
Total	290	100	100

This reflex that the large number of the patients in Bahrain are born from a nuclear family which average is between 3 — 8 members.

Table No. 7 Frequency and Percentage Distribution of Cases and Controls by Patients Order Among Brothers and Sisters

Patients Order Case Among Brothers and Sisters	Case		Control
	No.	%	No. (%)
1st	46	15.9	19
2nd	39	13.5	19
3rd	42	14.5	19
4th	38	13.1	8
5th	38	13.1	11
6th	40	13.8	7
7th and above	46	15.9	17
Blank			
Total	290	100	100

This table showes that the most frequency affected children are the first and the last. The first one because of the inexperience of the parents and the last one because of negligence.

Table No. 8 Cross Tabulation of Habits Breast feeding and Swimming

Swimming

Breast feeding	Yes	No	Blank	Total
Yes	27	219	2	148
No	6	28	–	34
Blank	1		7	8
Total	34	247	9	290

Breast Feeding Control	Swimming Control			
	Yes	No	Blank	Total
Yes	6	92	0	98
No		2		2
Blank	-	-	-	-
Total	6	94	0	100

It showes here clearly that bottle feeding and swimming are not major factors in the spread of Sup Otitis Media in this series.

Table No. 9 Any Member of the Family had Otitis Media

	Case		Control
	No.	%	No. (%)
Yes	102	35.2	17
No.	176	60.7	83
Blank	12	4.1	
Total	290	100	100

This table showes that 35.17 percent has one member of the family effected, which is a well known factor in spreading the diseases.

Table No.10 Frequency and Percentage Distribution of Cases and Control by Immunity

Immunity	Case		Control
Natural	No.	%	No. (%)
Yes	45	15.5	35
No	245	84.5	65
Total	290	100	100
Artifical	No.	%	No. (%)
Yes	219	75.5	80
No	71	24.5	20
Total	290	100	100

This table showes that most of our people been Immunized which is a healthy sign. On the other hand, when we look at those people who has contracted the infectious diseases, they constitute 15.5 percent which I think is a considerable number. Those who have not been immunized constitute 24.1 percent in this series.

Table No. 11 Frequency and Percentage Distribution of Cases and Controls by Diagnosis

Diagnosis	Cases		Control
	No.	%	No. (%)
Acute	129	44.48	
Chronic	143	49.32	
Blank	18	6.02	
Total	290	100	

The large number of Chronic Sup Otitis Media in this series reflects the magnitude of the problem in Bahrain

COMPLICATIONS

Mastoid Abscess	2	Female = 2
Meningitis	1	Male = 4
Acute Mastoiditis	2	
Etradural Abscess	1	

This table showes the seriousness of the complications that occur if Sup Otitis Media neglected. The Complication in this series is 2 percent.

All these patients except meningitis case operated upon and recovered fully. The meningitis case treated medically in Paediatric Department, when he recovered from meningitis Radical Mastoidectomy done.

Causative Organism in this Series

	Acute	Chronic	Blank
Staph Aureua	16	11	
Strepto Epidermides	3		
Strepto Pneumonia	6	2	
B. Streptoccus	12	16	
PS. Auregenosa	19	28	
H. Influenza	7	1	
No. Pathogens	27	21	
Mixed			
Proteus Mirabilies PS. Auregenosa	4	20	
Strepto Pneumonia Staph Auregenosa	14	3	
Proteus Mirabilies	14	24	
Coli Forms	3	1	
E. Coli	-	1	
Klebsilla	-	1	
Saprophytes	-	3	
Blank	4	0	

This table showes the most common pathogens causing Sup Otitis. Media as well it showes that the gram — Ve Organism are becoming more pravalent in the acute stage, may be this is due to the abuse of antibiotic, this has been found in series done in U.S.A. and Britain. The alarming figure in this table is the one for Proteus organism which may point out to our toilet habits.

CONCLUSION

It is better always to do a research to answer one or two questions, but this kind of research has answered many and lays the foundation for further research in this area.

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