

A STUDY OF HOSPITALIZED CASES OF MEASLES TO BASRAH GENERAL HOSPITAL

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ABSTRACT

A consecutive study was conducted during the year 1992, to study the hospitalized cases of measles in the infectious ward in Basrah General Hospital. Seventy cases of measles were analysed and the following information were obtained; age specific proportional ratios indicated that 60% of children included in the study were 1 to 5 years of age, the incidence of the following complications were: respiratory tract infections (60-100%) in different age groups, followed by conjunctivitis (79-85%), stomatitis (45-60%), gastroenteritis (7-24%), myocarditis (40%) and encephalitis (2.8%).

Only 28% of cases were vaccinated, three children died (4%), two with myocarditis and one with bronchopneumonia.

INTRODUCTION

Measles is an acute, highly contagious, ancient viral disease. Serious complications involving the respiratory tract and central nervous system occur in the minority of patients in highly developed countries. In other parts of the world, however, the high mortality and morbidity associated with measles present serious problems^[1].

PATIENTS AND METHODS

70 cases of measles admitted to the infectious ward in Basrah General Hospital were included in this study, during an epidemic of measles in

1992, they represented about 70% of cases admitted to the infectious ward. They were less than 13 years of age, the following information have been collected: age, residence of the patient, history of vaccination against measles, duration of symptoms before admission to the hospital, complications, history of contact with measles and outcome. E.C.G was done for all patients, chest X-ray was done for patients with respiratory complications.

RESULTS

70 children with measles were included. in the study, their age ranged from 5 months to 13 years. Table 1 shows the distribution of patients in regard to their age and residence, whether from center of Basrah or from peripheral areas, there was no significant difference in the 1st & 2nd group of patients in comparison to the 3rd group where significantly higher number of children older than 5 years were referred from central areas of Basrah.

Respiratory complications were the commonest complication affecting 60-100% of children of different age groups.

Table 2 shows the frequency of complications in regard to age, there was a significant difference in the incidence of respiratory complications among different age groups where by all infants developed respiratory problems in the form of laryngitis, bronchitis or bronchopneumonia in comparison to 81% & 60% in the 2nd & 3rd group respectively. Conjunctivitis was the second most common complication (79-85%), following by stomatitis (45-60%), gastroenteritis (7-24%), myocarditis (4%) encephalitis (2.8%), there was no significant difference in the incidence of these complications in different age groups.

Table 1. Distribution of patients of different age groups related to their residence

Age	Referral		Total	P. Value
	Central No. 37	Peripheral No. 33		
< 1y.	4 (11%)	9 (27%)	13	NS
1-5 y.	21 (57%)	21 (64%)	42	NS
> 5y.	12 (32%)	3 (9%)	15	<0.05

Table 2. Complication of measles related to age

Complications	Age			Total	P. Value
	< 1y. No. 13	1-5y. No. 42	> 5y. No. 15		
Conjunctivitis	11 85	33 79%	12 80%	56 80%	NS
Respiratory Comp.	13 100%	34 81%	9 60%	56 80%	<0.05
Stomatitis	6 46%	19 45%	9 60%	34 53%	NS
Gastroenteritis	3 23%	10 24%	1 7%	14 20%	NS
Myocarditis	3 7%	-----	-----	3 4%	
Encephalitis	-----	2 5%	-----	2 2.8%	

Table 3. Complications related to the sex of patients

Complications	Sex				Total	P. Value
	. (No. 42)		. (No. 28)			
Conjunctivitis	33	79%	23	82%	56 80%	NS
Resp. Comp.	36	76%	20	71%	56 80%	NS
Stomatitis	18	43%	16	57%	34 53%	NS
Gastroenteritis	11	26%	3	11%	14 20%	NS
Myocarditis	1	2.4%	2	7%	3 4%	
Encephalitis	1	2.4%	1	3.6%	2 2.8%	

Table 4. Complications related to the vaccination status

Complications	Vaccinated No.20		Unvaccinated No. 50		Total		P. Value
Conjunctivitis	14	70%	42	84%	56	80%	NS
Resp. comp.	16	80%	40	80%	56	80%	NS
Stomatitis	10	50%	24	48%	34	53%	NS
Gastroenteritis	1	5%	13	20%	14	20%	0.05
Myocarditis	1	5%	2	4%	3	4%	
Encephalitis			2	4%	2	2.6%	

Table 3 shows the frequency of complications related to the sex of patients, no significant difference was observed in the frequency of complications between males and females. Also this study shows that is significant difference in the incidence of gastroenteritis among unvaccinated & vaccinated children, where by higher percentage of unvaccinated children developed gastroenteritis as show in table 4. ECG findings of myocarditis were seen in 30% of patients.

Sixty seven children improved and discharged well the hospital and three children died, two myocarditis and one with bronchopneumonia.

DISCUSSION

Measles should not be regarded as a benign disease⁽³⁾, it is widely recognized to be a severe illness in developing countries⁽²⁾. The contrast between developed and developing world is most marked in relation to the severity and outcome of measles. The mortality rate $> 3.5\%$ have been reported in India and Bangladesh, this similar to the mortality rate in our study (4%), in contrast to 0.02 in the united states⁽²⁾.

Analysis of measles epidemic in Basrah in 1992 indicated that 60% of the measles occurred in children 1 to 5 years of age as in other countries of the world like India (where more than 50% of children are exposed to measles by 5 years of age)⁽⁴⁾ and in Scot; and⁽⁵⁾.

The study showed that older children affected with measles were mainly from the center of Basrah, this may be attributed to extended families in rural areas which provide a much greater opportunity for contact young children and infants.

Respiratory complications occurred in 60-100% of patients in different age groups, these results are similar to those found in India⁽⁴⁾ (50-90%)

but significantly higher than those found in Canada⁽³⁾ (22%), this may be related to early detection of cases and good care in developed countries. Conjunctivitis affected (79-85%) of patients which is again similar to that found in India^(4,3).

Gastrointestinal complications (diarrhoea, vomiting and dehydration) were noted in (7-23%), less than that observed in India (27-65%) and similar to that observed in Canada, this may be related to the nutritional status of children, gastrointestinal complications were significantly higher in unvaccinated children, there is marked association between measles and diarrhoea in developing countries and since some cases of measles complicated by diarrhoea have a high mortality rate, measles immunization is a potential intervention for diarrhoea control⁽⁶⁾.

Encephalitis was noted in 2.8% of all patients with measles, less than that observed in India (3-25%) and Canada (5%).

Myocarditis is an infrequent serious complication, transient ECG changes are said to be relatively common⁽⁷⁾, the interesting result in our study was that 30% of patients had ECG changes consistent with myocarditis which was not studied thoroughly as the case with other complications especially SSPE. In this study two of the three children who died, the cause was myocarditis, these results signify the role of cardiac involvement in the morbidity and mortality due to measles.

We think from this preliminary study that myocarditis is a serious complication of measles infection.

We suggest further studies to evaluate this complication by following them with monitoring.

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