Measles is Still a Severe Problem in Eastern Turkey

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In this study, we reviewed the demographic and clinical findings of 143 children with measles to draw attention the importance of measles and its complications in Eastern Turkey. Of 143 patients, 75 (52.5%) were boys , 68 (47.5%) were girls. The patients' age ranged from 5 months to 13 years (3.97± 3.11 years) . The peak of admissions (37%) occurred in the age range five to 24 months. The majority of the cases (84.7%) were not immunized against measles. Of 143 cases, 104 (72.7 %) cases were malnourished. Of 143 children ,57(40%) children had one or more complication of measles and the most common complication was pneumonia. Two (1.3%) children died. In conclusion, our findings showed that measles and its complications were severe problem in our country. We think that it is primarily related to very low socioeconomic status of our region.

Keywords : *Measles, Complication, Infant*

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Measles is an important childhood disease that is endemic throughout the world. It is still one of the most common communicable viral infections, although it is preventable by vaccination[1]. Measles is frequently seen in Turkey particularly in Eastern region, even though measles immunization is placed in the routine immunization program. In this study, we reviewed the demographic and clinical findings of 143 children with measles to draw attention the attention the importance of measles and its complications in Eastern Turkey.

Material and Method

The study includes 143 cases of measles who were admitted to the Yüzüncü Yil University Department of Pediatrics between January 2001 and January 2002. In this retrospective study the data were obtained from medical records and patients' charts, indicating measles. Physical examination and routine blood count were performed in all patients. Additionally, urine analysis, serum electrolytes, renal and liver function tests, blood gas analysis, serum C-Reactive protein level, sedimentation rate, cerebrospinal fluid examination, chest rediograph and magnetic resonance imaging were studied in some patients. Measles was diagnosed by clinical examination, but in some children it was confirmed by serological analysis, enzyme linked immunoassay method. While complicated and severe patients were hospitalized, the others were treated in the outpatient clinic. In the treatment, vitamin A was given in all children (a single does of 100,000 IU orally for children younger than 12 months and 200,000 IU for children older than 12 months). While antibiotherapy plus antipyretic was given in complicated children, only antipyretic was used in children without complication.

Results

Of 143 patients, 75 (52.5%) were boys, 68 (47.5%) were girls, and the ratio of boy/girl was 1.1/1. The patients' age ranged from 5 months to 13 years (3.97± 3.11 years). The age range of the children was as follows; 32 (22.3%) children were younger than 12 months of age; 21 (14.6%) were between 13-24 months; 34 (23.7%) were between 25-48 months; 21 (14.6%) were between 49-72 months and 35 (24.4%) were older than 6 years of age. The peak of admissions (37%) occurred in the age range five to 24 months. The majority of the

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Table 1. The complications observed in our patients with measles

	No of cases (n:57)	
	n	(%)
Bronchopneumonia	49	(34.2)
Otitis media	9	(6.2)
Tonsillo-pharyngitis	9	(6.2)
Cardiac failure	8	(5.5)
Convulsion	4	(2.7)
Meningoencephalitis	4	(2.7)
Laryngitis	1	(0.6)
Brain edema	1	(0.6)

cases (84.7%) were not immunized against measles. All 17 children who were younger than 10 months of age were not immunized against measles. Of 143 cases, 104 (72.7%) cases were malnourished.

Thirty-one (21%) children were hospitalized. The hospitalization period was between 1 day and 27 days (4.54 $\pm$ 5.01 days). Of 143 children 57 (40%) children had one or more complication of measles and the most common complication was pneumonia (Table 1). Two (1.3%) children died. One of them had malnutrition, pneumonia and heart failure and the other had malnutrition and pneumonia. Postmortem examination could not be performed in died children because their parents did not give permission to autopsy.

Discussion

Measles now occurs most often in non-immunizied preschool-aged children[1]. In the series of Khoo et al[2] 85.3% cases were not immunized against measles and 60% of the cases were malnourished. This ratio was 84.7 % in our study and 104 (72.7%) children had malnutrition. The age range was four months to 12 years and the maximum number of cases occurred in the 1 to 2 year age group (43.1%) in the series of Arya et at[3]. In the same series almost three-quarters (73.6%) of children (4 months to 12 years) with measles were below the age of 3 years[3]. In the other series, the median age of the patients was one year and 13.3% of the cases were between the ages of 6 and 9 months, The male to female ratio was 1.3:1[2]. Commey et al[4] report that the peak of admissions occurred in the age range seven to 12 months. In our series most children (37%) were between five and 24 months.

The chief complications of measles are otitis media, pneumonia and encephalitis, Laryngitis, tracheitis and bronchitis are also common[1]. In most series pneumonia was found to be the commonest complication of measles[2-5]. In the series of Khoo et al[2] 86% cases had at least one complication. In our series, 40 % children had one or more complication; this ratio was lower than those of khoo et al[2]. However, the most observed complication was pneumonia and this is in line with the literature data.

Neurologic complications are more common in measles than in any of the other examthematous diseases. The incidence of encephalomyelitis is estimated to be 1-2/1,000. Other central nervous system complication including Guillain-Barre syndrome, hemiplegia, cerebral thrombophlebitis, retrobulbar neuritis, and subacute scelerosing panencephalitis, occur rarely[1,6]. In our study, four children had meningoencephalitis (one of them also had brain edema) and four children had convulsion.

It was noted that the case fatality rate was between 1.3% and 16.86% in various series[2-4,7,8]. Abramson et al[9] noted that 15 of 237 hospitalized children with measles required intensive care; 11 (73.3%) patients were malnourished and four (26.6%) patients died. In agreement with the literature this case totality rate ratio was 1.3% in our study and both died children had malnutrition.

In conclusion, our findings showed that measles and its complications were severe problem in our country. It is primarily related to very low socio-economic status of our region in where malnutrition, growth retardation, gastroenteritis, parasitic diseases and the pediatric diseases preventable with vaccination are commonly observed[10]. Measles immunization is performed in the 10th month of age in the routine immunization program in our country. However, the rate of vaccination against measles and other diseases, preventable with vaccination are low in our region. We believe that the prevention of the disease in our region will depend on the education of parents.

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