Measles Outbreak in Adults at Dinajpur

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The aim of this study was to evaluate the clinical, epidemiological and demographical features of adult measles cases admitted to our hospital.. A total of 33 adult measles cases (21 male, 12 female) ages between 15-35 years were detected between march and April 2001. The diagnosis was based on the clinical findings, however only 4 of the cases could be serologically confirmed with the presence of measles IgM antibody . Fever (100%), cough (79%%) and conjunctivitis (48.48%) were the most common symptoms. All of the patients had maculopapular rash, Only one patient had convulsion. Luckily no complication like Pneumonia, otitis media were observed but 48.48% had diarrhoea. In conclusion, measles is still an important public health problem in our country, and since it may lead to severe complications and economic and labor loss, an effective elimination programme should be obtained by the use of vaccine in two doses and effective strategies for the immunization of the target populations.

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Key words: Measles, outbreak, adult

Introduction

Measles, also known as rubeola or morbilli, is an infection of the respiratory system caused by a virus, specifically a paramyxovirus of the genus Morbillivirus. Morbilliviruses, like other paramyxoviruses, are enveloped, single-stranded, negative-sense RNA viruses. Symptoms include fever, cough, runny nose, red eyes and a generalized, maculopapular, erythematous rash.

Measles (sometimes known as English Measles) is spread through respiration (contact with fluids from an infected person's nose and mouth, either directly or through aerosol transmission), and is highly contagious—90% of people without immunity sharing living space with an infected person will catch it. The infection has an average incubation period of 14 days (range 6–19 days) and infectivity lasts from 2–4 days prior, until 2–5 days following the onset of the rash (i.e. 4–9 days infectivity in total).[1]

An alternative name for measles in English-speaking countries is rubeola, which is sometimes confused with rubella (German measles); the diseases are unrelated.[2,3]

The classical symptoms of measles include four day fevers, the three Cs—cough, coryza (runny nose) and conjunctivitis (red eyes). The fever may reach up to 40 °C (104 °F). Koplik's spots seen inside the mouth are pathognomonic (diagnostic) for measles but are not often seen, even in real cases of measles, because they are transient and may disappear within a day of arising.

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The characteristic measles rash is classically described as a generalized, maculopapular, erythematous rash that begins several days after the fever starts. It starts on the head before spreading to cover most of the body, often causing itching. The measles rash appears two to four days after initial symptoms and lasts for up to eight days.[4]

Over the 13 years between 1987 and 2000, the case fatality rate across the United States was 3 measles-attributable deaths per 1000 cases, or 0.3% (177 deaths / 67,032 cases).[5]

In underdeveloped nations with high rates of malnutrition and poor healthcare fatality rates have been as high as 28%.[5] In immunocompromised patients (e.g. people with AIDS) the fatality rate is approximately 30%.[6] In developing countries where measles is highly endemic, the WHO recommend that two doses of vaccine be given at six months and at nine months of age.[7] The vaccine should be given whether the child is HIV-infected or not.[8] The vaccine is less effective in HIV-infected infants, but the risk of adverse reactions is low. Measles vaccination programs are often used to deliver other child health interventions as well, such as bed nets to protect against malaria, de-worming medicine and vitamin A supplements, and so contribute to the reduction of child deaths from other causes.[9]

Unvaccinated populations are at risk for the disease. After vaccination rates dropped in northern Nigeria in the early 2000s due to religious and political objections, the number of cases rose significantly, and hundreds of children died.[10]

Methods

The enrolled patients (n-33) were admitted in Dinajpur medical college hospital with fever and rash, other clinical feature suggestive of measles were also present. Though rubella was not able to be excluded, Measles was mainly a clinical diagnosis. Only four patients were confirmed by immunological test. Epidemiological and clinical data were collected and analyzed.

Results

All of the patients were between 15-35 years of age (Table I). Most of them were between 21-25 years (57.57%)

Table I: Patients in different age groups

Age in years	No of patient	% of patient
15-20	8	24.24%
21-25	19	57.57%
26-30	4	12.12%
31-35	2	6.06%

Among 33 patients male were 21 (64%) and female 12(36%), ratio was 1.8:1. Regarding occupation most of the patients were student followed by housewife, 8 patients (24.24%) were health care professional, among them 4 were confirmed serologically.

Clinical manifestations are shown in the Table II. Fever and rash was presented in all of the patients.

Clinical feature	No of patients	% of patient
Fever and rash	33	100
Cough	26	79
Body ache	18	52
Conjunctivitis	16	48
Headache	16	48
Rhinorrhoea	14	42
Diarrhoea	16	48
Hypotension	5	15
Lymphadenopathy	5	15
Convulsion	1	3

Convulsion was noticed in only one person. Hypotension and lymphadenopathy was observed in 5(15%) patients no complication like pneumonia, otitis media were observed but 16(48.48%) had diarrhoea. Mortality was nil. Most of the patient had normal leucocyte and platelet count . Leukopenia and elevated liver enzymes were detected in 28.5% and

37.2% of the patients, respectively. We could not perform serological test for most of the patients. Anti Measles antibody was positive in 4 patients and 3 had anti rubella antibody.

Discussion

In our study al the patients were between 15-35 years. This finding was similar with study of Celebi et.al where the age was between 16-36.They found female the main victim but we found male to be predominant.[10] Fever, rash and bodyache were main clinical feature, this is also similar. Diarrhoea was the most common complication (48.48%) but no patient suffered from this in a study of Bassetti et. al and only 17% in Celebi.G.et.al.[11,10]

It is a common believe that measles is a disease of children but it is now rare in children in our country due to EPI programme, rather some outbreaks are occurring in different places in adults. Maximum coverage against measles has started from year 2000 in children. So people more than 11 years are at increased risk of contracting the disease.

Conclusion

Measles is still an important public health problem in our country, and since it may lead to severe complications and economic and labour loss, an effective elimination programme should be obtained by the use of vaccine in two doses and effective strategies for the immunization of the target populations.

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