Original Article

Measles in Bannu

Surveillance Report on Endemic Measles in District Bannu

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ABSTRACT

Objective: The objective of the current study was to report the surveillance of endemic measles in district Bannu and its peripheries.

Study Design: Observational / descriptive study,

Place and Duration of Study: The study was conducted in Women and Children Teaching Hospital Bannu and various BHUs and dispensaries of countryside's of the district from Jan, 2016 to March, 2016.

Materials and Methods: Patients up to 16 years old were screened for febrile rash illnesses at women and children teaching hospital district Bannu and BHUs/dispensaries. Active measles cases were classified as measles, measles with eye and mouth complications, or severe complicated measles using IMCI criteria.16 most critical patient's blood samples were sent to CMH hospital laboratory Peshawar, KPK for further confirmation where test was done by ELISA technique utilizing IgM antibodies.

Results: Results showed that male children were highly infected than female. Children from 1-3 years were most affected, followed by children with 1 to 12 months. Least no of cases were reported in children from 4-8 years. Bannu city surrounded areas like mammashkhel, shiekhan, surrani were more affected from measles outbreak while nearby areas are at constant threat.

Conclusion: It is concluded that the peripheries were more affected from measles outbreak while nearby areas are at constant threat. In light of our findings, it can be stated that proper steps should be taken by government and non-government organization to control the situation in affected areas and to prevent the nearby areas specially the city from the current outbreak.

Key Words: Measles, Red rash, IMCI

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INTRODUCTION

Between 1999 and 2005, measles mortality was decreased globally but still, it is accounted for more than 300,000 deaths in year 2005[1]. According to WHO and UNICEF targeted countries for enhanced measles mortality reduction activities, Pakistan stands at 47[2-5]. According to WHO estimation, more or less 10 lakh children under the age of 5 suffer from measles virus infection in Pakistan including 20,000 deaths. Pakistan, in 2007-2008, conducted a vaccination campaign nationwide. In Pakistan, vaccination is programmed at an age of nine months as it is 85% effective if given at this age. Out of four provinces, KPK has received approximately 20% coverage due to which various cities of KPK observed an outbreak times to time.

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Bannu is located North of D.I.Khan and South-West of Kohat. It has a population of about 7 lakh people. Most of the people of Bannu belong to lower class family and are not literate. So they are unaware of most of the epidemic diseases. In January 2016, an out broke of measles in Bannu was observed. Measles is a respiratory disease which is caused by the measles virus and is the most deadly of all childhood rash/fever illnesses. Measles is childhood disease which occurs in early stages of life and rarely occurs in adults [6,7]. Measles virus normally grows in the cells that line the back of the throat and lungs. Measles is a major contagious disease which spreads rapidly in susceptible population mostly the transmission occurs by coughing and sneezing [8].

Measles is one of the major diseases that cause death among young children even though anti-measles vaccine is available which is safe and cost-effective. In the 2008, 164 000 measles related deaths were reported globally – and approximately nearly 450 deaths per day or 18 deaths per hour. Most deaths occurs in undeveloped countries and in developing countries as more than 95% of measles deaths occur in these countries which has weak health infrastructure. No case of measles is yet recorded in other animals, as measles is human disease[9].

Motivation for Research (Problem Statement): Measles is a serious problem which annually causes major number of death among young children although a safe and cost-effective vaccine is available. It is so serious that in the developing world, mothers say, "never count your children until after the measles" [10].Measles can cause miscarriage in pregnant woman, give birth prematurely and low birth-weight babies. One of the most debatable major problems that measles causes is that it weakens the immune system and opens the door to secondary health problems, such as pneumonia, blindness, diarrhea, encephalitis etc.

MATERIALS AND METHODS

Patients up to 16 years old were screened for febrile rash illnesses at women and children teaching hospital district Bannu and BHUs/dispensaries. Active measles cases were classified as measles, measles with eye and mouth complications, or severe complicated measles using IMCI criteria.

16 mostcritical patient's blood samples were sent to laboratory in Peshawar for further confirmation where test was done by ELISA technique utilizing IgM antibodies.

RESULTS

In District Bannu, 194children were identified who had illness that falls within the WHO case description of suspected measles. Of the 194overall patients having suspicion of the disease, 132 (68.04%) testified with immunization of the disease previously. Blood specimens of 16 patients were collected for pathology lab having an age group varies between 2-16 years. Five samples of the victims were excluded either not meeting the case definition or who received immunization within a month time. The remaining eleven patients possessed measles with infections.

In the 3 months preceding outbreak investigation, 66 patients with rash and fever from the five areas of Bannu were admitted to the hospital for assessment. These encompassed tasters from the outburst study in MamashKhel and Amandi. The results of investigation are given below.

Table No.1: Gender vise results in No and % of Measles cases in district Bannu

		Gender		
Sr. No	**Age**	**Male (N and %)**	**Female (N and %)**	**Total (N and %)**
1	0-30 Days	20(10.3%)	3(1.5%)	23(11.8%)
2	1 -12 months	29(14.9%)	7(3.6%)	36(18.5%)
3	13-36 months	46(23.7%)	53(27.3%)	99(51.03%)
4	37-48 months	8(4.1%)	16(8.2%)	24(12.4%)
5	49-98 months	8(4.1%)	4(2.06%)	12(6.2%)

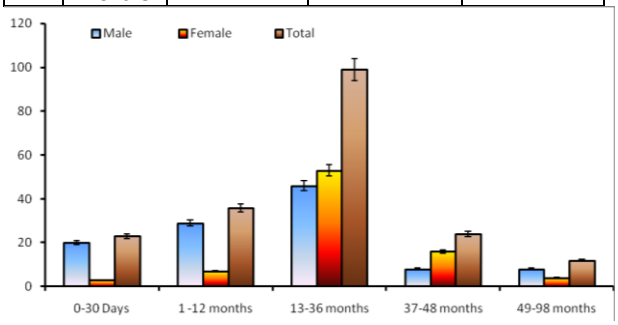

Figure No.1:Gender vise results of Measles cases in district Bannu

Table No.2: Results in No and % of area vise cases in district Bannu.

		Area (No and %)					
Sr. No	**Age**	**Sokari**	**Shiekhan**	**Amandi**	**MamashKhel**	**Surrani**	**Total**
1	0-30 Days	7 (3.6%)	3 (1.5%)	10 (5.1%)	3 (1.5%)	0 (4.1%)	23 (11.8%)
2	1 -12 months	5 (2.5%)	10 (5.1%)	12 (6.1%)	2 (1.03%)	7 (3.6%)	36 (18.5%)
3	13-36months	15 (7.8%)	15 (7.8%)	4 (2.06%)	32 (16.5%)	33(17.1%)	99 (51.1%)
4	37-48 months	0 (0%)	8 (4.1%)	0 (0%)	16 (8.2%)	0 (0%)	24 (12.3%)
5	49-98 months	4 (2.06%)	2 (1.03%)	0 (0%)	4 (2.06%)	2 (1.03%)	12 (6.1%)

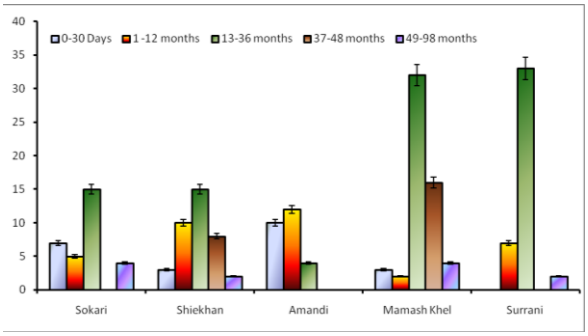

Figure No. 2: Results of Measles cases in district Bannu

DISCUSSION

An outbreak of measles in District Bannu is reported in our study. This study shows/highlights the outbreak of measles in Bannu, depending only on a scientific validation of measles case definition in vast areas of Bannu. In Egypt, where measles immunization is covered almost in all of country, measles and rubella still remain endemic[11,12]and laboratory-based surveillance in different time periods had recognized recurrent assorted eruptions of measles with highest disease occurrence from March to May. Similarly,

in-depth surveys of measles and rubella outbreaks in Bangladesh identified a mixed outbreak of the diseases which suggests that mixed outbreak scan be comparatively communal in the sub-continent area. A more recent investigation that was carried out in capital of Sindh, Pakistan and which was supported by WHO Integrated Management of Childhood Illness, reveals that case definition for measles had only 75% of the time and that many suspected measles cases had Dengue fever[13,14] There are some limitations to this investigation which must be mentioned. A few children were tried for measles so these results cannot be generalized to other nearby districts. Based on these findings, it is needed that lab-based surveillance for measles should be carried out throughout the country. Due to case similarity of measles with some other illnesses, lab validation testing for suspected measles and rubella cases should be done to confirm measles outbreaks. There is often a desire to obtain specimens on all cases in an outbreak, despite the fact that this may not be necessary in every case.

CONCLUSION

Based on our findings, it is concluded that there is a huge outbreak of Measles in District Bannu. Such as areas like MamashKhel, Surrani, and Shiekhan are highly affected by this virus. So there is need of advance treatment and adequate action to control the disease on time before the scenario get worst. For this purpose public awareness program should be started to inform people about adequate pre immunization with anti-measles vaccine and first aid against measles. In order to save other areas from possible outbreaks, vaccination campaigns against measles should be started as soon as possible, because nearby areas as Nurar, Fatima Khel, Daud Shah, and Bannu City are in huge and continuous threat.

Conflict of Interest: The study has no conflict of interest to declare by any author.

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