



ijcrr

Vol 04 issue 16
Category: Research
Received on:20/06/12
Revised on:02/07/12
Accepted on:12/07/12

A CROSS SECTIONAL STUDY TO ASSESS THE MORBIDITY PATTERN IN FLOOD AFFECTED AREAS IN RAICHUR

Mallikarjun K. Biradar, S.M. Biradar, VS Kamble

Dept of Community Medicine, BLDEU's Shri B M Patil Medical College, Bijapur

E-mail of Corresponding Author: mallubiradar82@gmail.com

ABSTRACT

Background: To identify common diseases encountered in flood affected areas. **Aims & objectives:** To know the morbidity pattern of different diseases in flood affected areas. **Materials & methods:** It is a community based cross sectional study done in 3 flood affected areas. All the patients attending the health camp were clinically examined and interviewed using a semi structured questionnaire. Data was analysed using appropriate statistical test. **Results:** A total of 750 patients attended the health check up camp. There were 40% cases of Acute GE, 25% cases of ARI, 12% cases of undiagnosed fever and 11% myalgia. Dermatological conditions like rashes, local allergic reactions & scabies together contributed to 9% cases. Other illness such as injuries, ENT infections & mental illness accounted to 3% cases. **Conclusion:** The majority of patients were suffering from Acute GE 40% & ARI 25%. Since GE and ARI is major problem faced during floods, proper health education should be given to the people regarding safe water usage & waste disposal methods. Measures to prevent overcrowding should be undertaken.

Keywords: floods, morbidity pattern, overcrowding

INTRODUCTION

Disaster can be defined as "any occurrence that causes damage, ecological disruption, loss of human life or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community or area"¹. In the past 20 years natural disasters have affected at least 800 million people & caused more than 3 million deaths. Each week there is one natural disaster of sufficient magnitude to require external assistance from the international community.^{2,3} Natural disasters may be associated with a wide variety of acute and long term health effects.^{4,5} The health problems faced by disaster victims vary depending on the type of disaster. The morbidity pattern in floods consists of

immediate problems like drowning & injuries. This is followed by occurrence of Acute GE, ARI, fever, skin infections etc. Immediate public health actions following floods include the provision of potable water, food, vector control & restitution of vital environmental health services^{6,7,8}. The present study was carried out to assess the morbidity pattern in flood affected areas.

MATERIALS AND METHODS

A cross sectional study was conducted by Department of Community Medicine, Navodaya Medical College, Raichur as a part of Disaster management free health check up camp. The study was carried out in Seyatalab, Mooraradoddi & Moodmalai area of Raichur. A

total of 750 patients attended the health check up camp. These patients were subjected to a semi structured questionnaires followed by clinical examination. Data was analysed using proportions and descriptive statistics.

RESULTS

A total of 750 patients were examined in health check up camp. The numbers of male and female patients examined were 56% and 44% respectively. Adult patients constituted to about 65% and children were 35% in number. It was observed that Acute GE was the most common morbidity accounting to 304 (40%) cases, of which children affected were 108 (36%) and

adults were 196 (64%). The next common morbidity was found to be ARI 25% cases, which included common cold, cough, upper respiratory infection & pneumonia. Fever of unknown origin was found in 12% patients. This was closely followed by myalgia reported by 11% cases with patients complaining of generalized body pain which may have been due to the injuries suffered during the floods. The 9% patients had skin infections constituted of local allergic reactions, scabies & pyoderma. The other diseases such as mental illness, ENT infection, conjunctivitis, jaundice & wounds constituted to about 3% cases which were treated accordingly.

Table – 1: Distribution of diseases

Disease	Number	Percentage
Acute GE	304	40
ARI	184	25
Fever	89	12
Myalgia	83	11
Skin Infection	67	9
Others	23	3
Total	750	100

Table – 2: Distribution of diseases according to place wise

Disease	Moodmalai	Mooraradoddi	Seyatalab
Acute GE	115 (38%)	107 (35%)	82 (27%)
ARI	69 (38%)	44 (23%)	71 (39%)
Fever	29 (33%)	15 (16%)	45 (51%)
Myalgia	22 (27%)	6 (7%)	55 (66%)
Skin Infection	11 (16%)	17 (26%)	39 (58%)
Others	0 (0%)	1 (4%)	22 (96%)
Total	246 (33 %)	190 (25 %)	314 (42%)

Acute GE cases were reported to be highest in Moodmalai 115 (38%) and least in Seyatalab 82 (27%). Rests of the diseases like ARI, fever,

myalgia, skin infections & other diseases were reported higher in Seyatalab when compared to Moodmalai and Mooraradoddi

Table – 3: Distribution of diseases according to children and adult

Disease	Children	Adult
Acute GE	108 (36%)	196 (64 %)
ARI	109 (59%)	76 (41 %)
Fever	19 (21%)	73 (79%)
Myalgia	3 (4%)	75 (96%)
Skin Infection	19 (29 %)	47 (71%)
Others	5 (20 %)	20 (80%)
Total	263 (35%)	487 (65%)

On comparison with age, ARI was reported to be high in children 109 (59%) when compared to adults who constituted to 76 (41%). Other diseases were found to be significantly high in adults.

DISCUSSION

The diseases and injuries observed in the health check up camp provides an interesting perspective on the morbidity pattern that can be associated with disasters. A large number of cases (40%) of gastrointestinal diseases were seen & given treatment. The similar findings were observed in the aftermath of Orissa flood in 2001, where (54%) of Acute GE was reported⁹. In Bangladesh, the flooding that followed by 1991 Tropical cyclone reduced the portability of water from wells and caused widespread outbreak of diarrhoeal diseases¹⁰. During the Somali famines (1991-92), Measles & Diarrhoeal diseases accounted for the vast majority of deaths among persons in temporary camps¹¹. The causes for such cases in our study could have been due to the lack of potable water and general insanitary conditions in the aftermath of the floods.

The rise in ARI cases (25%) could have resulted from overcrowding & lack of ventilation in the makeshift camps. The findings of our study of ARI cases were similar to the result observed in

Central Viet Nam 2003 floods¹² & in Balochistan Pakistan floods in 2003¹³.

As per our study Fever of Unknown Origin cases constituted to about (12%) which was in accordance to the findings followed by Bangladesh floods (6.5%) in 1988¹⁴.

Skin lesion consisting of local allergic reaction, rashes, scabies & pyoderma constituted to about 9% of cases in our study. The reason could be overcrowding and unhygienic conditions.

CONCLUSION

The majority of patients were suffering from Acute GE (40%) & ARI (25%). Acute GE could be due to the lack of safe drinking water and general sanitary conditions in the aftermath of floods. Overcrowding & lack of ventilation in the makeshift camps attributed to the increased incidence of ARI. Ecological changes favour the breeding of vectors. Population displacement might have lead to the introduction of communicable diseases

RECOMMENDATION

Implementation of public health measures to reduce the risk of transmission of communicable diseases. Proper health education and IEC activities should be undertaken in community regarding safe water usage and to avoid overcrowding. Proper sanitary & waste disposal methods should be applied. Ensure adequate

excreta disposal away from the water sources. Vector control measures should be undertaken by health authorities.

ACKNOWLEDGEMENT

Authors would like to thank all the participants of study. Authors also acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors, editors and publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

REFERENCES

1. Coping with major emergencies – WHO strategy and approaches to humanitarian action, Geneva, World Health Organization, 1995.
2. National Research Council: Confronting Natural Disasters: an International Decade for Natural Disaster Reduction. Washington, DC: National Academy Press, 1987, pp 1-67.
3. Wasley A: Epidemiology in the disaster setting. *Current Issues in Public Health* 1:131 – 135, 1995.
4. Noji EK: Disaster Epidemiology. *Emerg Med Clin North Am* 14: 289-300, 1996.
5. Centre for Disease Control and Prevention: Public Health Consequences of Disasters. Atlanta: Centre for Disease Control and Prevention, 1989.
6. Centre for Disease Control and Prevention: Rapid health needs assessment following Hurricane Andrew-Florida and Louisiana. *MMWR* 41: 696-698, 1992.
7. Sommer AS, Mosley WH: East Bengal Cyclone of November 1970. *Lancet* 1:1029-1036, 1972.
8. Lillibridge SR: Managing the environmental health aspects of disasters: water, human excreta and shelter. In Noji EK (Ed): *Public Health Consequences of Disasters*. New York: Oxford University Press, 1997, pp 65-78.
9. Maj MP Cariappa, Maj P Khanduri *Medical Journal of Armed Forces India*, Vol. 59, No. 4, 2003; 59 : 286-289.
10. Bilqui AH, Hoque R, et al: Environmental health and the 1991 Bangladesh cyclone. *Disasters* 17:143-152, 1993.
11. Moore PS, Maraffin AA, et al: Mortality rates in displaced & resident populations of central Somalia during 1992 famine. *Lancet* 341:935-938, 1993.
12. Wwww. Who.int/disasters/repo/who_vietnamfloods srep_12 may.
13. World Health Organization, Emergency Humanitarian Action (EHA) Islamabad, Pakistan. *Epidemiological Week* (1-5), January-2009.
14. Siddique AH, Baqui AH, et al. *Journal Diarrhoeal Dis Res*, 1991 December; 9 (4): 310-4.