Disease Pattern and Outcome of Pediatric Patients Admitted in A Non-Government Medical College Hospital

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ABSTRACT

Background: An understanding of epidemiological trend in hospital admissions, including diseases and death pattern, is essential for health care planning, appropriate resource allocation and improving existing services facilities. Most of the causes of morbidity and mortality in Pediatric patient particularly under five and neonate are preventable by proper antenatal/perinatal care, early detection and management. To assess the disease pattern and outcome of pediatric patients admitted in a non government Medical College hospital this research was performed.

Materials and methods: This retrospective observational study was conducted at the Department of Child Health, Marine City Medical College Hospital (MCMCH) Chattogram, Bangladesh during 2019 June to 2021 June. A total of 567 patients were included for the study. Details on demographic characteristic, disease pattern, outcome, retrieved from the medical records and admission registers, and tabulated and analyzed using Microsoft Excel (Microsoft Office20 16).

Results: Among the admitted patient 0-<2 months age group were (53)9.35%, 2 months-<2 years age group were 254(44.80%), 2 years-<5 years age group were 96(16.93%), 5 years-<12 years age group were 164(28.92%). Among the admitted patients, most common acute watery diarrheawere 131(23.10%), bronchiolitis were 121(21.34%), bronchopneumonia were 95(16.75%), Neonatal Sepsis and Enteric fever were 26(4.59%), Bronchial asthma were 18(3.17%), Low birth weight/preterm were 17(3.00%), Neonatal Jaundice were 12(2.12%) and others were 92(16.22%). The outcome of total 567 Pediatric patients- discharged with advice were 498(87.83%), discharge on request were 45(7.49%), referred were 20(3.53%) and dead were 4(0.71%).

Conclusion: Findings of this study helps us to understand and pediatric admission trend and death pattern of this institution, which are essential for patient’s services, including effective case-management strategies.

Key words: Disease; Morbidity; Mortality; Outcome; Pattern.

Introduction

Morbidity and mortality among children are merely estimated in developing countries, because of the difficulties in obtaining data accurately. Useful information on this regard can easily be obtained from periodic review of morbidity and mortality in medical institutions as it reflects what is occurring in a community.1 Previous studies done in Nepal have diverse results with sepsis, prenatal asphyxia, prematurity and neonatal jaundice being the commonest causes of admission.2 Child health in Bangladesh has faced significant challenges largely because of poverty, over-burdened healthcare services related to huge paediatrics populations. Pneumonia, diarrhoea, measles, malaria, malnutrition, injuries, drowning and the high number of neonatal deaths and poor care-seeking behavior, all contribute to the high levels of child mortality. Mortality declines are associated with improved coverage of effective interventions to prevent or treat the most important causes of child mortality and with improvements in socioeconomic conditions. During the last decades, medical recordings have increased dramatically. Leading to more awareness of the diseases commonly affecting paediatric age groups opening a wide entrance to the prevention of possible complications and decrease its incidence. Routinely collected patient information has the potential to yield valuable information about health systems. However, there have been few comprehensive analyses of paediatric admissions at hospitals. Such understanding of epidemiological trend in hospital admission is critical for health care planning and appropriate resource allocation.3, 4 Childhood mortality is a liable indicator

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and female was 244(43.03%). Figure-3 shows the demographic characteristic of rural patients were 128(22.57%) and urban were 439(77.43%). Table-I shows the disease profile of admitted patients- There are most common diseases acute watery diarrhea were 131(23.10%) bronchiolitis with secondary bacterial infection were 121(21.34%) bronchopneumonia were 95(16.75%) Neonatal Sepsis and Enteric fever were 26(4.59%), childhood Bronchial asthma were 18(3.17%), Low birth weight/preterm were 17(3.00%) Neonatal Jaundice were 12(2.12%) PNA were 11(1.94%) and PEM with Complication were 11(1.94%), Nephrotic syndrome were 7(1.23%) and others were 92(16.22%). Table III- shows the outcome of total 567 pediatric admitted patients -discharge with advice patients were 498(87.83%) discharge on request patients were 45 (7.49%) referred were 20(3.53%) and dead were 4(0.71%).

Materials and methods
This retrospective observational study was conducted at the Department of child Health, non-government medical college hospital, Chittagong, Bangladesh during 2019 June to 2021 June. A total of 567 patients were included for the study. Data were collected from hospital register, patient file records, death certificates. Details on age, sex, diagnosis spectrum, outcome, retrieved from the medical records and admission registers, and tabulated and analyzed using Microsoft Excel.

Inclusion Criteria
- 0 days to <12 years
- A patient who left the hospital before complete their treatment (DOR-Discharge on Request)
- Patient referred to the higher center or to the other discipline.

Exclusion criteria
- A patient who left the hospital after an admission of their own (DORB-Discharge on risk bond)
- A patient who left the hospital unnoticed (Absconded)
- Patient without adequate clinical records were also excluded from the study.

Results
The age of the patients-0-<2 months were (53)9.35%, 2 months-<2 years age group were 54(44.80%), 2 years-<5 years age group were (96)16.93%, 5 years-<12 years age group were 164(28.92%) figure-1. Figure-2 shows the gender distribution of male was 323(56.97%) and female was 244(43.03%).
Discussion

In this retrospective study, 0 to <2 months age group were 53(9.35%), 2 months to <2 years age group were 254(44.80%); 2 years to <5 years age group were 96(16.75%), total <5yrs were 403(71.07%), 5 years-<12 years age group were 164(28.92%)(Table I). Blessing Abhulimhen–Iyoha et al revealed that 72.4% patients were aged less than 5 years, among them 50.7% were infants and Anwarul Haque et al found children under 5 year were 62.5%. This study is almost similar to BlessingAbhulimhen–Iyoha et al and dissimilar to Anwarul Haque et al. In this study, among the total admitted patient 128(22.57%) were from rural area and from Urban area patient were 439(77.43%) (Figure 3). This may be due to geographical location of the institution (Urban). Common diseases among the admitted patients in this study shows that acute watery diarrhea were 131(23.10%) bronchiolitis were 121(21.34%), bronchopneumonia were 95(16.75%), Neonatal Sepsis and Enteric fever, were 26(4.59%), Bronchial asthma were 18(3.17%), Low birth weight/preterm were 17(3.00%), Neonatal Jaundice were 12(2.12%), PNA, PEM with Complication were 11(1.94%) each, Nephrotic syndrome were 7(1.23%) and others were 2(0.71%)(Table I).

In the study, 498(87.83%) patients were discharged with advice, 45 (7.49%) patients were discharged on request, 20(3.53%) were referred and 4(0.71%) were dead (Table II). Only 4 death was found in this study despite the highest number of admissions from Acute watery diarrhea- which may be due to early referral and parental awareness. Globally 18% and in Bangladesh 20% of childhood death occurs from AWD. However, the findings relating to diarrheal deaths are less in number, which may be due to the awareness and increased use of Oral Rehydration Solution (ORS).

Limitations

This was a hospital-based study. Sample size was small and short duration of time. So, the result of this study may not be reflecting the whole picture of the country.

Conclusion

Findings of this study helps us to understand and pediatric admission trend and death pattern of this institution, which are essential for health-sector planning, including effective case-management strategies. Therefore, to improve neonatal outcome, it is imperative to be vigilant especially during the first 24 hours of life. Progress is possible, but only if we manage to prevent or detect and treat problems as early as possible, which can be achieved by public awareness, training of labor and procurement of necessary equipment’s.

Disclosure

All the authors declared no competing interest.
References


