

Causes of Death among Children Aged >5 Years in a Public Hospital in New Delhi

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ABSTRACT

Retrospective analysis was done for 3817 children aged 5-12 years admitted in a tertiary-care, public hospital in New Delhi between January to December, 2015. Mortality rate was 5.8%. About 47.1% deaths were due to central nervous system involvement; viral meningoencephalitis being the predominant cause. Overall, infectious diseases caused >80% of deaths. Public health interventions to reduce child mortality need to review such data for effective measures.

Keywords: *Mortality, Outcome, Inpatient.*

About eight million deaths took place every year among children aged between 5-12 years, with 93.7% of such deaths limited to low- and middle-income countries [1]. Not much information is available about the causes of deaths in this age-group in hospitalized patients [2]. The present study reviews the mortality of all children aged 5 to 12 years, admitted in a tertiary-care public hospital in New Delhi, between January to December, 2015.

Hospital records were retrieved and analysed; and the data of surgical cases were excluded. Those who were discharged against medical advice (DAMA) or absconded were also excluded. All the diagnoses were coded by two physicians individually. Depending on the diagnosis, deaths were attributed to a particular system. In case of disagreement, an expert opinion was sought.

Out of 3817 admissions in this age-group, overall mortality rate was 5.8% (n= 221, 57.9% male). It was 6.7%, after excluding 504 children who went DAMA/ absconded. Mean age was 8.59 years. Most of the children (42.5%) died within 24 hours of admission. The mortality rate was slightly higher in females (5.7% against 5.5% in males). Overall, 34% and 43% deaths occurred in age group 5-7 years and 8-10 years, respectively.

About 47.1% deaths could be ascribed to central nervous system (CNS) causes. Overall, viral meningoencephalitis was the most common cause of mortality (27%) followed by tubercular meningitis (9%), sepsis (7.2%) and pneumonia (5.9%). Acute lymphoblastic leukemia was the most common haematological abnormality, contributing to 4.5% of the deaths. Overall, infection was implicated in 83.3% deaths.

A higher death rate is always expected in a tertiary-centre as many complicated and critical cases get referred from different district- and state-level hospitals. More than 42% deaths within 24 hours of admission indicate referral of very sick children. Similar to previous studies, majority of the deaths were attributed to CNS pathology [3,4]; though, it could be due to referral bias, as complicated neurological cases are usually referred to tertiary- care hospitals. Globally, infectious diseases remain as first priority for pediatric health, causing 68% deaths among under-five children [5]. Our findings demonstrated the same trend among the older children. In view of the large number of cases of meningoencephalitis contributing to mortality, there is need to provide facility for investigating/

treating meningitis/ encephalitis at the district level to reduce loss of time in referral to tertiary hospitals. Limited resources are to be allotted optimally in public hospitals to ensure care at both the levels. Amidst the paucity of epidemiological documents in this age group, this article attempts to clarify the various causes of mortality in Pediatric patients older than five years. Future prospective studies should explore etiology and changing trend in referral pattern so that appropriate public health interventions can be planned.

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