

Experience in Childhood Mortality

Pages with reference to book, From 365 To 368

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Abstract

Of 3280 children admitted in NICH during the year 1982, 632 (19.2%) died. The cases were divided into two groups. Of 2536 group A children (0-12 years), 431 (16.99%) died. Seventy percent of deaths occurred under 1 year and 90% under 5 years of age. Main causes of death were protein energy malnutrition (PEM) with diarrhoea (32.7%), P.E.M. with respiratory infection (7.4%) and Encephalitis (10.2%). Of 744 group B cases (neonates) 201 died, the mortality being 27.02%. The main causes of death were low birth weight (50.8%), infections (18.4%) and birth injuries (10.4%)(JPMA 34: 365 1984).

Introduction

Pakistan has a population of about 85 million¹, with approximately 18% children under 5 years. Infant mortality rate is estimated to be about 100/1000 live births².

W.H.O. estimates that out of 122 million babies born every year, 12 million (10%) die before they are one year old³. A further 5 million (4%) die before reaching school age of 5 years. Six million die of diarrhoea, and another five million of preventable infectious diseases e.g. Tuberculosis, Measles, Poliomyelitis, Diphtheria, Whooping cough and Tetanus³.

Pakistan has a very high infant and childhood mortality. This study presents the frequency and causes of death in children admitted -in National Institute of Child Health.

Material and Methods

A prospective study was carried out on all hospital based deaths in children from 0-12 years at NICH, during the year 1982.

Although hospital mortality data has its limitation, it remains a useful available indicator of the child health status/services available.

Information on deaths was obtained from all the three units of the Department of Paediatric Medicine including the neonatal unit. Six hundred and thirty two deaths were analysed. Age, sex, feeding practices, nutritional status, disease, duration of stay in the hospital, and the causes of death were noted. The findings were recorded on a "mortality proforma", specially designed for this purpose, which was filled up in detail by Medical Officers, when ever a death occurred. Children were divided in two groups; Group A: included all children admitted in the Paediatric Medical units from 0-12 years. Group B: included babies admitted in the newborn nursery in the neonatal unit only.

Results

Group-A: Four hundred and thirty one of 2536 patients admitted during, 1982 died, the mortality rate being 16.99%.

Group-B: In the neonatal unit, 744 newborn babies were admitted; of these 201 babies died, giving a mortality rate of 27.02%.

Almost 70% of deaths in group-A occurred in children under 12 months of age, and another 21.1% in 13-60 months age group, i.e. 90% children under 5 years of age died (Table I).

Table I

Deaths in Group –A.

Age	No.	Percentage
Under 12 Months	298	69.1
13 – 60 Months	91	21.1
Above 60 Months	42	9.8
Total	431	100.0

The Most common causes of deaths in children and neonates is shown in table II, III and IV.

Table II

Causes of Death in Group –A.

Cause of Death	No.of Cases	Percentage
P.C.M. with Diarrhoea	141	32.7
Encephalitis	44	10.2
P.C.M. with Respiratory Infection	32	7.4
Diarrhoea along with P.C.M.	23	5.4
Miscellaneous	191	44.3
Total	431	100.0

Table III

Causes of Death Under One Year In Group - A.

Cause of Death	No. of Cases	Percentage
P.C.M. With Diarrhoea	123	41.3
P.C.M. With Respiratory Infection	28	9.4
Diarrhoea Alone.	22	7.4
Meningitis.	15	5.0
Miscellaneous.	110	36.9
Total	298	100.0

Table IV

Causes of Death in Group - B.

Cause of Death	No. of Cases	Percentage
Low Birth Weight	102	50.8
Cerebral Anoxia	21	10.4
Respiratory Infection	21	10.4
Septicaemia	16	8.0
R.D.S.	11	5.5
Miscellaneous	30	14.9
Total	201	100.0

Table V**Duration of Stay in the Hospital Before Death.**

Days	Group – A		Group – B	
	No. of Cases	%	No. of Cases	%
0–1 Days	216	50.11	98	48.76
2–3 Days	87	20.18	42	20.90
4–7 Days	77	17.87	38	18.90
8 & Above.	51	11.74	23	11.44
Total	431	100.0	201	100.0

Table V shows fifty percent of deaths occurred within 24 hours, and 70% within 72 hours of admission. In 50% children who died, malnutrition was a significant factor while the death was precipitated by diarrhoea and respiratory infections. Children with acceptable nutritional status accounted for only 7.4% of deaths due to severe diarrhoea and dehydration.

Discussion

Most of the world children are living in the developing countries. In 1970, out of a total of 1400 million children, 1100 million were living in the less developed regions. In the decade 1970-80, the number of children in the developing countries increased by 300 million, while the corresponding increase in the developed countries was only 20 million.

Infant mortality rate (I.M.R.) in Pakistan is still unacceptably high. It is about 100/1000 live births i.e. ten times that of the developed countries³.

Less than a hundred years ago the I.M.R. in Europe and North America was as high as it is in the developing world now and the main causes of death then were much the same, diarrhoeal diseases, malnutrition, respiratory infections, and other infectious diseases³. Over the next fifty years, I.M.R. in the industrialized world fell steeply from 140/1000 to 30/1000 by the middle of the century. The main reason for this was rising living standards better food, water, housing, sanitation, education and income. Health technology and medical services played only a secondary role.

The hospital data of neonatal mortality indicates that three main causes of death are low birth weight (50.8%), infections (18.4%) and birth injuries (10.4%). A similar pattern has been observed in a study in NWFP⁴.

In infants the most common cause of death was malnutrition and diarrhoea (41.3%) and malnutrition with respiratory infections (9.4%) i.e. in 50% of infants malnutrition was a significant contributory factor. In a study carried out in Lahore slum area, malnutrition was directly or indirectly responsible for 60% of infant mortality. It was associated with diarrhoea in 40.6% cases and infections in 27.2%⁵.

The experience of childhood mortality reported in this study is similar to other developing countries⁶.

It is tragic that a small number of preventable diseases are the cause of “major catastrophe” amongst children in the low socio-economic group. Here the standard of living is low, and there is lack of adequate or appropriate services both in the urban slum and rural areas. Poverty is not necessarily the major factor, but ignorance of the art of mothercraft i.e. proper feeding and weaning practices, knowledge of immunization, and use of oral rehydration solution during an episode of diarrhoea is certainly widely prevalent.

Where-ever socio-economic uplift has occurred whether as a result of political change or by means of a service oriented programme, rapid decrease in mortality figures has followed.

References

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