

Causes of Death in Children under- Five Years Old at AL-Batool Teaching Hospital

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Abstract

Background: Child mortality is usually used as appointer of community health. A decreasing in mortality is possible with increasing the interventions that targeting the important causes of death.

Objective: To assess death causes in children below five years old.

Patients and Methods: A descriptive retrospect study depend on revision of files in AL- Batool teaching hospital. data was collected during a period of 30 months from 1st of February ,2013 to 30th of November, 2015.by using a well structured questionnaire designed for the study. Date of death, sex and age, and the cause of death were collected. the recorded .Death causes were classified according to the International Classification of Disease version10 (ICD-10). Stillbirths were excluded.

Results: A 500 deaths were listed, (254 boys and 246girls). About 198 (39.6%) of deaths were listed as infants death (29 days-11months),while 172(39.4%)recorded as neonatal deaths(0-28days),and 130(26%)as children deaths(1-4years). For the neonate , prematurity/LBW(65)37.79% and neonatal sepsis(47)27.32% were the most important causes of death.For the infants, pneumonia(64)32.23% and sepsis(53)26.76%were the most important causes of death and in the children age group, diarrhea(46)35. 38%and pneumonia (29) 22.30%. were the leading causes of death.

Conclusion: Together death causes in children below five years old were pneumonia &sepsis.

Key words: Dearth prematurity pneumonia children.

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Received: 18th January 2018

Accepted: 21th January 2018

<https://doi.org/10.26505/DJM>

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Introduction

Declining in childhood mortality due to socioeconomic improvement and development of child survival interventions. But till now 8.8 million child die each year before their 5th birthday [1]. A decreasing in childhood mortality can be done with increasing interventions that targeting the important causes of death [2,3].

An indicators of country development is the mortality rate below five years

old.(4,5The (U5MR) of children is the death rate of children before the age of 5,which include:1.from birth to first month of life 2. from first month to fifty-nine months.(6) In certain communities child mortality rate had been decreased due to the development in social & economic status [7].

Certain authors have reported that the decrease in child death can be due to the enhanced assessment of child mortality

[8].The overall politics of exploitation in child health lead to call for more appropriate & more domestic assessment of child mortality [9].Our information's on the effect of intervention policies for many communities is still weak[10]. A spirit recording system that catch all births & deaths is the fundamental trend to assess child mortality ; yet , only few developing communities have fully develop spirit recording systems [1]. The wide range of death causes &the vulnerability to certain diseases in this age with others make the determinations of childhood mortality below five years is so important[12]. Child death assessment is usually used as a signal for community health[13].However, in the developing countries, registered data on child mortality were relatively reliable with another indices of population health[13]. Actually, child mortality is a key of health consequence in developing communities [14].

Patients and Methods

A retrospective descriptive study depend on revisions of files in AL Batool teaching hospital, Diyala Governorate ,that present health services for rural &urban areas in the governorate. Data was recorded during a period of 30 months from the first of February, 2013 to thirty of November, 2015.By using a well structured questionnaire intended for this study. For the study requirement, a neonatal death was

defined as a death occur on or before first month of life , infants death as a death occur from the first month to the eleven months of life. Children's death as a death occur from the first year to the fourth year of life. The death recorded department in AL Batool teaching hospital consider the first level to record the lists of death.To make the results more reliable the patients files were reviewed ,the next parameters were recorded: date of death, gender and age and the death cause. The recorded causes of death were classified the according to the International Classification of Disease version 10 (ICD - 10). Stillbirths were excluded from the study.

Statistical Analysis

The statistical software, STATA version 9.0 (StataCorp; College Station, Texas) was used for the data analysis.

Results

A 500 deaths were listed, (254 boys and 246 girls).About 198 (39.6%) of deaths were listed as infants death (29days-11months),172(39.4%)were listed as neonatal deaths(0-28days),and 130 (26%) as children deaths (1-4years).as shown in table 1.In the neonate set prematurity /low birth weight were the main causative agents for death. For the infants set,pneumonia&sepsis were the main causative agents of death. In the children set diarrhea & pneumonia were the main causative agents of death. As shown in table(2).

Table (1): Distribution of death by age &gender in children below 5 years old at Al batool teaching hospital 2013_2015.

Age category	male		female		total	
	N	%	N	%	N	%
Neonate(0-28days)	92	36.22	80	32.52	172	34.4
Infant (29 days-11 months)	100	39.37	98	39.83	198	39.6
Children (1-4 years)	62	29.90	68	27.69	130	26
Total	254	100	246	100	500	100

Table (2): Causes of death in children below 5 years old at Al batool hospital 2013_2015.

Neonate(<29days)			Infant (29 days -11 months)			Children (1-4 years)		
Causes	N	%	Causes	N	%	Causes	N	%
Prematurity/low birth weight	65	37.79	Pneumonia	64	32.23	Unintentional injuries	1	0.76
Birth asphyxia	26	15.11	Diarrhea	21	10.60	Diarrhea	46	35.38
Pneumonia	14	8.13	Undetermined /unknown			Pneumonia	29	22.30
Undetermined/unknown			Hydrocephalus	2	1.01	Severe malnutrition	5	3.84
Congenital anomalies	19	11.04	Severe mal nutrition	2	1.01	Meningitis	7	5.38
Neonatal Sepsis	47	27.32	Prematurity /low birth weight	1	0.50	Other infection	25	10.23
Meconium aspiration			Meningitis	5	2.52	Hydrocephalus	6	4.61
Renal failure			Bowel obstruction	1	0.50			
HIV/AIDS			Other infection	8	4.04			
Respiratory failure	1	0.58	Sepsis	53	26.76	Malignancies	9	6.92
Diarrhea			Respiratory failure	1	0.50	Tuberculosis	1	0.76
Other infection			Miscellaneous	40	20.20	Bowel obstruction		
Miscellaneous			HIV/AIDS			Miscellaneous	1	0.76
Total	172	100	Total	198	100	Total	130	100

Table (3): The main causative agents of death in children below 5 years old at Al batool hospital 2013_2015.

Causes of death	Number	%
Prematurity/low birth weight	66	13.2
Pneumonia	107	21.4
Diarrhea	67	13.4
Birth asphyxia	26	5.2
Severe malnutrition	7	1.4
Hydrocephalus	8	1.6
Unintentional injuries	1	0.2
Other infection	33	6.6
Meningitis	12	2.4
Sepsis	87	17.4
Congenital abnormalities	19	3.8
Bowel obstruction	1	0.2
Malignancies	9	1.8
tuberculosis	1	0.2
Respiratory failure	2	0.4
Miscellaneous	41	8.2
Total	500	100

Discussion

In this study we found that many health cases were the main causative agents of death in children below 5 years old. These causes are different according to age. The male to female ratio was [1.03] which is lower than a study done by Sam et al. in South Africa [15] which about (1.26). This may be attributed to sample size.

In this study we found that 39.6% of demise were recorded in infantile age set. While in a study done by Sam et al. in South Africa [15] they found that 48% of death occur in the neonatal period this can be explained as many neonate die at emergency department before patients files making and no

registration done. But these results were similar to the study done in KwaZulu-Natal Province 48% of deaths in children below five years old happened in infantile period (Stephen et al., 2009(17) & Garrib *et al.*, 2006)(18).

This study found that the leading cause of death recorded in neonate was prematurity and low birth weight (37.79%) then neonatal sepsis 27.32% and birth asphyxia 15.11%. These findings concur with study done by Sam et al. in South Africa [15]. Also similar to result of other researchers (Garry *et al.*, 2006(18); Pattinson, 2009(20); Rashid *et al.*, 2010(21); Stephen *et al.*, 2009)(17).

This may be explained by the squeal & complications of premature delivery ,so we need special works to decrease premature delivery . Pneumonia is the leading cause of death in infantile set constitute about(32.23%)of causes of death then sepsis and diarrhea .This finding is similar to a study done by Sam et al. in South Africa[15] that found pneumonia,HIV/AIDS and diarrhea are the most common causes of death.This can be attributed to many environmental & socioeconomic factors like overcrowding ,poor hygiene ,lack vaccination ,there is no HIV recorded cases in our study this may be related to religious nature of our society or hidden unpublished cases or lack index of suspicion so cases gose unnoticed.

In children set, diarrhea, pneumonia ,meningitis responsible for more than 50% of all cases these results were concur with another study that founds HIV/AIDS, diarrhea, pneumonia were the leading causes of death (Nannan *et al.*, 2012; Stephen *et al.*, 2009; Garrib *et al.*, 2006).Collectively we found that infections(pneumonia, sepsis& diarrhea (were the leading causes of deaths of in children below five years old children.

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