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Original Research Article

A study on health morbidities among under five children in relation to birth weight in urban health centre field practice area at tertiary care centre, Bidar, Karnataka, India

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ABSTRACT

Background: Low birth weight (LBW) i. e. birth weight <2500 grams is a major public health problem in many developing countries. About 30% of babies born in India are LBW. Birth weight of an infant is the single most important determinant of its chance of survival, healthy growth and development. This study is to correlate the health of under five children in relation to birth weight.
Methods: Community based cross sectional study carried in urban health centre field practice area of Bidar Institute of Medical Sciences Bidar. 250 under five children were surveyed and findings were recorded.
Results: Among the 250 under five children surveyed 68 were LBW children and 182 were normal birth weight children.164 children were having acute respiratory tract infection (ARI), 121 were underweight, 21 were having vitamin A deficiency, 145 were anaemic, 25 were having diarrhoea and 130 were having fever.
Conclusions: underweight, Vitamin A deficiency, diarrhoea and fever were significantly associated with LBW babies compared to babies with normal birth weight.

Keywords: ARI, Diarrhoea, LBW, Vitamin A deficiency, Under five children

INTRODUCTION

More than 20 million infants worldwide, representing 15.5 per cent of all births, are born with low birth weight, 95.6 per cent of them in developing countries. Half of all low birth weight babies are born in South-central Asia, where more than a quarter (27 per cent) of all infants weigh less than 2,500 g at birth.[1] Birth weight of an infant is the single most important determinant of its chance of survival, healthy growth and development. LBW is one of the most serious challenge in maternal and child health in both developed and developing countries. The lower the birth weight the lower the survival chance, many of them become victims of protein energy malnutrition and infections.[2] Hence efforts are made to find the causes for LBW and correct them. If the importance of LBW is understood and necessary heath policies are made then the chances of survival of under five children can be improved and overall development of children can be ensured.

METHODS

This study is a community based cross sectional study carried in urban health centre field practice area of Bidar Institute of Medical Sciences Bidar. A total of 250 under five children were surveyed. Birth weight confirmation will done by looking the documentary record i.e. hospital discharge card/ other records. Care takers of the children like parents or grandparents or guardians were

interviewed with pre-tested and pre-designed proforma. History of common health problems such as acute respiratory tract infection, diarrhoea & fever in the 15 days prior to visit will be taken. Children will be assessed for their nutritional status by considering the weight for age and classified. Anaemia will be classified as per clinical assessment. The common signs of vitamin- A deficiency will be considered to label the child of Vitamin-A deficiency.

RESULTS

In this study 250 under five children were surveyed. Among them 68 were LBW children and 182 were normal birth weight children. Of the 68 LBW children 49(72.06%) were having ARI, 53(77.94%) were underweight, 11(16.18%) were having Vit A deficiency, 42(61.76%) were anaemic, 16 (23.53%) were having diarrhoea and 52 (76.47%)were having fever. Among the 182 normal birth weight children 115(63.19%) were having ARI, 68(37.36%) were underweight, 10(5.49%) were having Vit-A deficiency, 103 (56.59%) were anaemic, 9(4.95%) were having diarrhoea and 78 (42.86%)were having fever (Table 1). Underweight, Vit-A deficiency, diarrhoea and fever were high among the LBW children compared to normal birth weight children.

Table1: Health morbidities among under five children in relation to birth weight.

Health morbidities	LBW children n=68 (%)	Normal birth weight children n=182 (%)	χ^2	P value
ARI	49 (72.06)	115 (63.19)	1.72	0.25
Underweight	53 (77.94)	68 (37.36)	32.66	0.001
Vitamin A deficiency	11 (16.18)	10 (5.49)	33.37	0.001
Anaemia	42 (61.76)	103 (56.59)	0.55	0.5
Diarrhoea	16 (23.53)	9 (4.95)	19	0.001
Fever	52 (76.47)	78 (42.86)	22.4	0.001

DISCUSSION

The low birth weight prevalence in this study is 27.2 % which is comparable to the national value i.e. 30%. Underweight among LBW children is significantly high compared to normal birth weight children. in this study under five children who were underweight is 48.4 % whereas NFHS-4 data shows that 43% of under five children in Bidar are underweight. Similar findings were mentioned by Pedro et al, Mansour E et al, Motta et al and Wadgave et al.[4-7] No significant difference was observed for ARI among LBW children and normal birth weight children where as other studies like Pedro et al[4], Mansour E et al[5], Motta et al[6] and Wadgave et al[7] have shown that ARI was significantly high compared to normal birth weight children.[4-7] In the present study diarrhoea, Vit- A deficiency, and fever were significantly high compared to normal birth weight children. Similar findings were observed by Pedro et al, Mansour E et al, Motta et al and Wadgave et al.[4-7] Among LBW children and normal birth weight children no difference was observed for anaemia. Hence LBW has significant impact on vulnerability for various infections and deficiency and overall health of under five children.

Birth weight is the most significant determinant for the children morbidity and mortality. LBW pushes the children towards infection and deficiencies leading to more morbidity and mortality. Hence health programmes should be directed towards reducing the LBW prevalence which will translate towards less morbidity and mortality among under five children.

CONCLUSION

Underweight, Vitamin A deficiency, diarrhoea and fever were significantly associated with LBW babies compared to babies with normal birth weight.

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