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A Study of correlation between the age of mother and birth weight of the baby: A hospital based study

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Abstract

There are a multiple factors which contribute in the pregnancy outcome. Research has documented that teenage mothers are at high risk for poor birth outcomes: Babies born to teenagers are more likely than those born to women in their 20s to be born early, to weigh less than 2,500 g at birth or to die before age one. A cross sectional hospital based study was conducted for a period of six month. It was significant to find that early pregnancy as well as late pregnancy has a very significant association with the birth weight of the babies. 66% of the deliveries were conducted in the 25-35 age groups, out of those 86% of the babies weighted above 2kg. The following was concluded :early age of pregnancy, this includes teenage pregnancy also and late age of pregnancy that is above 35 yrs of age is highly associated with low birth weight babies.

Keywords: Mother, Pregnancy, Babies, Low birth weight.

Introduction

Early marriage and teenage pregnancy is a social concern which needs to be addressed as a national concern. There are a multiple factors which contribute in the pregnancy outcome. Research has documented that teenage mothers are at high risk for poor birth outcomes: Babies born to teenagers are more likely than those born to women in their 20s to be born early, to weigh less than 2,500 g at birth or to die before age one. Some of the explanations proposed for these adverse birth outcomes are biological—i.e., that in early pregnancy the mother, who is still growing may be competing for nutrients with the foetus, or that pregnancy within two years after menarche increases the risk of preterm delivery.¹ Psychological factors may also be involved, since many adolescent pregnancies are unplanned, unwanted or discovered late;² a pregnant teenager may lack the emotional maturity to take responsibility for a pregnancy even after she has decided to carry it to term. And part of the explanation may simply reflect selection bias, since teenagers who become mothers are more likely than others to be poor, to be undereducated or to live in areas with limited access to resources and services³

On the other end of the age spectrum, while women who give birth relatively late in their reproductive lives have fewer socioeconomic disadvantages than teenagers, they nonetheless share increased risks for poor birth outcomes. Delayed childbearing poses its own biological risks, such as an increased likelihood of medical conditions such as hypertension and diabetes.^{4,5} In addition, women aged 35 and older, like teenagers, have higher rates of unintended pregnancy than do women in their 20s and early 30s.⁶ And risks for poor birth outcomes increase further with age, with those older than 40 being at greater risk than 35-39-year-olds.⁷

In consideration of the above facts a study was planned to compare the birth weight of the babies with the age of mother in the pregnant females who delivered in the attached hospital of the medical college in the district.

Aims and Objectives

1. To Study the most common age group of pregnant females.
2. To Study the relation between the age of mother and weight of the baby.
3. Suggest recommendations based on study findings.

Materials and Method

The study was carried out in the obstetrics and Gynaecology department of the attached hospital of the medical college of the district and which drains the patients from the hilly regions as well as the plane regions of the zone. It caters to patients coming from mixed population from both rural and Semi urban region.

Even being a private hospital, most of the services are highly subsidised; therefore, a large proportion of its clientele comprises poor and lower middle class people. It serves all sections of people living in the vicinity, and, being a specialist hospital also caters to referred cases from nearby areas.

The study includes all the 384 births conducted in the hospital in this period. We selected women who were booked in for the delivery.

The information was collected daily by visiting the Obstetrics and Gynaecology department on daily basis.

Study Area: The study was conducted in the Obstetrics and Gynaecology department of the SGRR Medical College – Dehradun.

Type of study: Hospital based cross sectional study.

Study period: The study was conducted over a period of six months from 01/01/2013 to 30/06/2013.

Study sample: All the hospital deliveries during this period were included for the study purpose these were 384.

Statistical Analysis: The data was analyzed by using statistical packages of SPSS version 15 & Graph Pad.

Result

Table 1. Mother's distribution according to baby weight and there Age

Age Group of Mother	Baby weight in kg				Total
	Less than 1.0	1 to 2	2 to3	3 to 4	
15-25	4	42	49	27	122
25-35	5	31	121	96	253
35-45	1	2	5	1	9
Total	10	75	175	124	384

*** Significant at 0.001

Chi-square test value:	32.7
degrees of freedom:	6
p-value:	0.001

There is higher significance association between baby weight and age of mothers.

Discussion

During the study period, total 384 deliveries were conducted in the hospital. Four of them were below one kg and in the age group 15-25 yrs of age. 33% of the babies were above three kg in weight and maximum of them were in the 25-35 age group. It was significant to note that out of 9 births in the age group 35-45, 8 were below 3 kg. 22% of the baby weighed below 2 kg and 52% of them were in the 15 – 25 age group of mother. Therefore it was significant to find that early pregnancy as well as late pregnancy has a very significant association with the birth weight of the babies. 66% of the deliveries were conducted in the 25-35 age groups, out of those 86% of the babies weighted above 2kg. Hence the most common age group of pregnancy was 25-35 yrs of age in the present study.

Conclusion

To conclude early age of pregnancy, this includes teenage pregnancy also and late age of pregnancy that is above 35 yrs of age is highly associated with low birth weight babies, which can further lead to significant problem in growth and development of the child.

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