

TEENAGE AS A RISK FACTOR IN PRIMIGRAVIDAE

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SUMMARY

Four hundred and forty eight primigravidae delivering at Sassoon General Hospital, Pune were studied in order to find out the influence of age on Obstetrical and Neonatal outcome and to quantitate the risk related to age. The girls aged 15 years or less had a high frequency of anemia (27.6%). The incidence of pre-term labour was significantly higher (24.4%) for primigravidae aged 17 years or less in comparison to only 10.4% for those between 18-25 years of age. The perinatal mortality rate was highest for young teenagers of 15 years and less which went on progressively decreasing with increasing age, prematurity being the commonest cause of perinatal deaths.

A young primigravida aged 17 years or less therefore appears to be a 'high risk' pregnant woman in need of extra medical care during pregnancy.

Introduction

A teenage primigravida has been identified as "High Risk Mother" in need of extra medical care. Optimum age for reproduction is considered to be between 20 and 35 years, extremes on either side being associated with higher complication rates especially so in primigravid mothers.

The minimum age of marriage for girls was amended by the Government of India as 18 years in 1978. Even then the problem of teenage pregnancy is very much existing as child marriages are still prevalent in Indian community. An attempt is therefore made to study the pro-

portion of teenage primigravidas and to find out the nature and extent of risk faced by them during pregnancy and labour.

Material and Methods

448 consecutive primigravid women delivered at S.G.H. Pune over a period of 18 months were included in the study. According to maternal age the patients were grouped in five groups as follows: 15 years and below, 16-17 years, 18-19 years, 20-25 years and 26 years and more.

Of the 448 women, delivering their first baby, 68.7% were teenagers and 29.3% were 17 years or less. The proportion of mothers availing ANC was observed to be increasing with increasing age, 45.8% of teenagers did not avail any prenatal care as against 29.3% women aged 20 years or more.

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The mean height and weight was found to be increasing with increasing age. There was a rise in mean height of about 5 cms, and in mean weight of 5 Kg. of mothers aged 18 years, when compared to those aged 17 years or less (Table I).

The overall incidence of anemia (Hb < 10 gm%) was 19%, it was of mild nature in majority of women and none had severe anemia (Hb < 6.5 gm%). The girls aged 15 years of less had a high frequency of anemia (27.6%) while in other age groups it was more or less similar (Table I).

In all, 14.1% women had preterm delivery. The incidence was significantly higher at or below 17 years of age (24.4%) in comparison to those between 18-25 years of age (10.2%) ($P < 0.001$).

Toxemia and anemia were the important causes associated with nearly 59% of preterm deliveries. A substantial proportion (28.6%) of women had no obvious cause for preterm delivery.

Course of Labour

Duration of labour was found to be shorter in teenage mothers specially be-

TABLE I

Mean Height, Weight and Incidence of Pregnancy Complications in Relation to Age in Primiparae

Age in years	-15	16-17	18-19	20-25	26+	Total
No. of cases	29	102	177	127	13	448
Percentage	6.5	22.8	39.5	28.3	2.9	100
Mean height in cms.	142.5	142.6	147.5	148.3	152.5	—
Mean weight in Kg.	41.5	42.4	47.5	49.6	57.1	—
Anemia %	27.6	18.6	19.2	17.6	15.4	19.0
Toxemia %	27.6	26.5	22.6	29.9	38.5	26.3
Preterm delivery %	20.7	25.5	10.7	9.5	—	14.1

The overall incidence of toxemia was 26.3%. There was no significant difference between the proportion of teenagers and control group developing toxemia during pregnancy. However, higher (25.3%) proportion of toxemic teenagers developed eclampsia than in control group (5.3%). Primigravidae above the age of 25 years had a higher frequency of toxemia.

low the age of 17 years (mean 13.2 hours). Highest incidence (7.7%) of prolonged labour was noted in elderly primigravidae above 25 years of age.

The chances of spontaneous vaginal delivery by vertex were observed to be decreasing with increase in age. The caesarean section rate was 10.4% for teenage mothers in comparison to 14.9% in control group (Table II).

TABLE II

Influence of Age on Course of Labour in Primiparae

Age in years	-15	16-17	18-19	20-25	26+	Total
Mean duration of labour in hours	11.9	14.6	17.8	15.3	16.5	—
Prolonged labour 24 hours %	3.5	2.9	2.8	3.9	7.7	3.8
Sp. vaginal delivery %	82.8	77.5	75.1	71.6	23.1	73.6
Caesarean Section %	13.7	5.9	12.4	14.9	53.8	12.9
C.S. done for CPD %	10.3	3.9	7.9	7.8	30.7	7.8
Puerperal complications %	13.8	16.6	14.1	25.2	—	17.4

Twenty one (6.8%) teenage mothers had caesarean section for cephalopelvic disproportion in comparison to 7.9% in control group. However, at and below 15 years of age the caesarean section rate for CPD was slightly higher. (10.3%).

Neonatal Outcome

The mean birthweight of babies born at term was around 2400 gms in all the teenage groups. The mean birthweight was about 200 gms more in control group in comparison to teenage mothers (Table III).

TABLE III
Influence of Age on Neonatal Outcome

Age in years	-15	16-17	18-19	20-25	26+	Total
Mean birthweight of term newborns	2453	2351	2404	2607	2965	—
LBW at term %	43.5	51.2	33.5	33.9	23.1	37.4
Congenitally malformed neonates %	0	0.9	0	2.4	0	0.8
Perinatal deaths per 1000 births	172.4	107.8	95.5	86.6	0	97.9

A higher incidence of LBW babies at term (49%) was observed in mothers aged 17 years or less in comparison to 33.2% in mothers of 18 years or more.

The perinatal mortality rate (PNMR) was 97.9/1000 births for entire series. It decreased progressively with increasing age. It was 172.4 for age group of 15 years and below in comparison to 86.6 for control group.

Prematurity was the commonest cause of perinatal death (36.4%). Asphyxia and neonatal infections each accounted for 20.5% deaths. Puerperal complications were observed less frequently in teenage mother than in control group.

Discussion

The problem of teenage pregnancy still has a fair proportion and the incidence

observed in present study is 68.7%.

Gupta and Mirchandani (1978) have reported increasing incidence of severe toxemia with increasing age but have observed eclampsia more frequently in teenagers. They have also reported a very high incidence of anemia in teenagers (74%), While Gehlot *et al* (1971) did not observe significant difference in incidence of anemia in different age groups but they observed a higher incidence of toxemia in teenagers.

The incidence of preterm labour reported by many Indian authors is higher

in teenage primigravidae and ranges between 14 to 31%. The results obtained in present study are comparable to those reported by Dr. Dutta which was 22.7% for primis aged 17 years or less.

The association of short stature (ht. < 145 cms.), poor built (wt. < 45 kg.) and toxemia along with lack of prenatal care seemed to influence the incidence of preterm labour directly in teenage primigravidae.

Western reports (Isrsel *et al* 1963) however do not show higher incidence of preterm labour in young mothers which could be due to racial and socio-economic factors and differences of nutritional status of mothers.

Most authors have observed shorter and easier labour in teenagers. The fre-

quency of prolonged labour and operative delivery is also lesser resulting into lesser incidence of puerperal complications in teenager.

A young primi of 17 years or less runs a significantly higher risk of preterm delivery specially if she is short statured and underweight. A girl aged 15 years or less also faces increased risk of anemia, she is more prone to develop eclampsia and she may require caesarean section for contracted pelvis more often. The risk of Perinatal deaths also is considerably increased hence such patient must have an Institutional delivery under special-ists supervision.

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