

PREGNANCY IN ADOLESCENCE

by

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Introduction

Adolescence may be defined as the whole period of childhood during which sexual differentiation occurs. It lasts almost a decade without sharp onset or ending (Wellenbanch L. Burton). As working formula women from the age of ten to sixteen have been considered in the paper as adolescent women. Pregnancy during the period of sexual differentiation seemed to be an interesting subject and in this paper it has been proposed to make a detailed study of the adolescent pregnant women.

Material and Source

Bashirhat Sub-Divisional Hospital drains both urban and rural patients covering all types of social and economic status. Amongst the rural community the system of getting girls married before menarche prevails. As a result, a fair number of pregnant adolescent women had been admitted to Bashirhat Hospital during five years from 1967 to 1971 (both the years inclusive).

During these five years, there had been 9,743 deliveries of which 799 were patients from age ten to sixteen, representing about 8.2 per cent of all deliveries. In Clark *et al*'s series the same percentage being five. The patients have been divided into three groups for comparison according to antenatal care they received.

From Tables No. I, II, III, it had been

observed that eighty-three to eighty-seven percent of cases were primigravida and twelve to sixteen per cent cases were secundi-gravida and terti-gravida patients were few. Most of the patients were between the ages of fourteen and sixteen, the majority belonged to the age group of sixteen, the reason being that secundi-gravida and terti-gravida patients belonged to the age group of sixteen in addition to the primigravida patients. The fertility rate also increased with age group as most of the periods in the age group of ten to fifteen were anovulatory. The majority of patients were delivered by vertex, only nineteen patients delivered by breech presentation and two of them were transverse. There was no twins in the whole series. From the above two tables, it can be conferred that the problem of adolescent pregnant women is mainly that of primigravida delivered by vertex presentation.

From Table IV, it was evident that pre-eclampsia is the major complication in all groups of adolescent patients varying from nineteen to thirty per cent. Pre-eclampsia (29.78%) was most common amongst patients with no antenatal care (Group C) and least (14.7%) amongst patients with close supervision by regular antenatal care (Group 'B').

The patients with irregular antenatal care had pre-eclampsia in nineteen per cent of cases. In comparison, the patients above the age group of sixteen had pre-eclampsia in four per cent of case with close supervision and in six per cent of

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TABLE I
Source of Antenatal Care

		No. of cases	Percent-age
Group A	Hospital antenatal clinics (one or two attendances)	327	40.9
Group B	Private physician and regular antenatal cares	190	23.8
Group C	No pre-natal care	282	35.3
		799	100

TABLE II
Age Distribution

Age	Group A		Group B		Group C	
	No. of cases	%	No. of cases	%	No. of cases	%
10	3	1	5	3	3	1
11	3	1	4	2	3	1
12	3	1	4	2	6	2
13	7	2	8	4	6	2
14	49	15	11	6	37	13
15	105	32	40	21	78	28
16	157	48	118	62	149	53

TABLE III
Gravidity Distribution

Gravidity	Group 'A'		Group 'B'		Group 'C'	
	No.	%	No.	%	No.	%
I	271	83%	163	86%	245	87%
II	52	16%	25	13%	34	12%
III	4	1%	2	1%	3	1%

TABLE IV
Complications in Pregnancy

	Group A		Group B		Group C	
	No.	%	No.	%	No.	%
Pre-eclamptic toxæmia	62	19%	28	14.7%	84	29.78%
Premature separation of placenta	3		1		4	
Essential hypertension	2		1		1	
Eclampsia	14	4.3%	1	0.7%	15	5.3%
Anaemia	51	15.6%	8	4%	55	19.5%
Placenta prævia	3		1		2	

cases with improper antenatal care. Even after close supervision as indoor patients the incidence being about five times higher than those patients above

the age group of sixteen years. These findings corroborate with the series of Clark *et al* where the incidence of toxæmia was thirteen percent with close supervision and 23 percent amongst those with

Labour: The average duration of labour in primigravida adolescent patients was 14 hours, varying from 10 hours to 18 hours. Primary uterine inertia was present only in 5 cases.

TABLE V
Types of Labour

	Group A		Group B		Group C	
	No.	%	No.	%	No.	%
Premature labour	85	26%	26	13.7%	87	31%
Forceps delivery	12	3.7%	6	3%	9	3%
Caesarean section	4	1.2%	2	1%	3	1%
Perineal lacerations	36	11%	19	10%	32	11%
Postpartum haemorrhage	8	2.4%	4	2%	6	2%

no prenatal care. The incidence of toxæmia was three percent amongst all patients with close supervision in Clark *et al's* series.

In these adolescent patients, the endocrine system may not be fully matured and the endrocrinal imbalance may be a factor for the high incidence of toxæmia and this is just a hypothesis worth searching for.

The incidence of eclampsia was only 0.7 per cent in Group 'B' (proper antenatal care) in comparison to five per cent amongst patients with no antenatal care (Group C). Therefore, the rate of eclampsia can be reduced by prenatal care. The cases with premature separation of placenta and essential hypertension were negligible.

Another serious complication was anaemia in pregnancy amongst the adolescent patients. The incidence of anaemia was 19.5 per cent amongst patients with no antenatal care and four per cent in patients with proper supervision. The anaemia was due to malnutrition and iron deficiency and could be corrected by iron and proper diet. Israel and Wouterex (1963) reported incidence of anaemia amongst teen age pregnant women.

The rate of premature deliveries before 36th week of gestation varied from 13.7 per cent in Group B with close supervision to 31 per cent in patients without prenatal care (Group C). The incidence was 26% amongst patients with irregular antenatal Care (Group A). This high incidence of premature labour was mainly due to toxæmia of pregnancy common in the adolescent pregnant women. The incidence in Group 'B' is definitely less due to early hospitalization of the toxæmia patients.

In Clark *et al's* series, the incidence of premature labour was 20.6 per cent in patients without antenatal care and 11 per cent amongst patients with proper antenatal care.

The high incidence of premature labour due to toxæmia of pregnancy had been found to be the main cause of perinatal death which will be discussed subsequently.

The rate of forcep delivery is the same in comparison with the incidence amongst patients above the age group of sixteen. The forcep delivery was due to unyielding perineum and none due to outlet contraction. The incidence of caesarean section is only 1 per cent in comparison

to 4-6 per cent amongst patients above the age group of sixteen. Apparently due to immature pelvis the chance of cephalopelvic disproportion should be present in high percentage amongst adolescent pregnant women. Reviewing the cause of caesarean sections and forcep deliveries it was found that out of 9 cases only in two cases caesarean section was done for pelvic contraction, one with breech presentation and the other presenting by vertex. The other indications were transverse lie in two cases; placenta praevia in two cases and the other three cases were for foetal distress from early rupture of membranes. So immature pelvis did not give rise to obstructed labour in the adolescent pregnant women. The average birth weight apart from premature labour was between 2.75 kg. to 3.2 kg. The evidence of perineal laceration is a bit high due to immature pelvic structure and the normal cases were conducted by attending nurses.

The incidence of postpartum haemorrhage was within normal limit.

Perinatal Deaths: There were forty-eight perinatal deaths, the incidence was about six per cent.

TABLE VI
Causes of Perinatal Deaths

	Group A.	Group B.	Group C.	Total
Prematurity	14	10	16	40
Intracranial stress	2	1	2	5
Miscellaneous	1	1	1	3

The major cause of perinatal deaths was prematurity, forty out of forty-eight perinatal deaths. All these forty perinatal deaths were due to prematurity from toxemia of pregnancy.

Maternal Death

There were two maternal deaths from

eclampsia in Group 'C' (cases without antenatal care).

Summary

1. The study presented here represents 799 cases of adolescent pregnant women divided into three groups according to types of prenatal care.

2. In all the three groups, toxemia was found to be the major complication giving rise to high incidence of premature labour and perinatal death.

3. The incidence of caesarean section is low in spite of the immature pelvis in adolescent pregnant women.

4. Close supervision can reduce the incidence of toxemia and associated perinatal deaths.

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