

**CLINICAL STUDY OF TEEN-AGE PREGNANCY (1883 CASES) FROM  
THE GOVERNMENT R.S.R.M. LYING-IN HOSPITAL, MADRAS**

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**SUMMARY**

The clinical picture of teen-age pregnancy presents obstetrics evidence that they constitute a high risk group, requiring high priority in services. The incidence of anaemia and toxæmia are definitely greater in this group of patients, due to the demands of the growing adolescent and the growing fetus. The incidence of pelvic contraction (especially inlet) warrants a higher incidence of caesarean section for this indication.

The unwed mother in this group requires special services, regarding family planning advice in order to prevent the repetition of pregnancy out of wedlock.

The pregnant teen-age deserves and needs much more attention and high priority to comprehensive services than have existed.

*Introduction*

Previous studies of pregnancy complications in teen-agers have yielded conflicting results. Fewer complications than older patients were found by Briggs *et al* (1962) but other authors like Hassan and Falls (1964) have demonstrated either an increased or decreased incidence in one or more of the following: Poor prenatal care, toxemia, anaemia, uterine dysfunction, Cephalopelvic disproportion, low birth weight, congenital anomalies and perinatal mortality. The lack of agreement between these re-

ports encouraged us to take up a study of teen-age pregnancy.

*Methods and Materials*

A clinical study of 1883 teen-age pregnancy for the year 1982 was conducted in the Government R.S.R.M. Lying-in Hospital, Madras. The total number of deliveries for the year 1982 was 11788, and the incidence of teen-age pregnancy for the year 1982 was 15.97%.

Table I gives the age distribution. Most of the patients fell into the age group between 17 to 19 years (1721).

As shown in Table II, 83.4% of the cases were unbooked.

The number of unwed mothers in this study was 27, constituting 1.4% of teen-age pregnancy.

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*Accepted for publication on 26-11-83.*

TABLE I  
Age Distribution

Age	No. of cases	%
13 years	1	0.05
14 years	4	0.2
15 years	30	1.6
16 years	127	6.7
17 years	235	12.5
18 years	856	43.5
19 years	630	33.5

TABLE II

	No. of cases	%
Booked	313	16.6
Unbooked	1570	83.4

The incidence of abortions in teen-age pregnancy was 12.1% whereas the hospital series it was 12.87%.

There were 9 cases of vesicular mole giving an incidence of 0.48% and 2 cases of ectopic pregnancy.

There were 221 cases of toxæmias, giving an incidence of 11.7%, three times higher than the over-all hospital incidence which was 3.55% which is very significant. Among the toxæmias there were 34 cases of eclampsia, giving an incidence of 1.8% and the over all hospital incidence being 1%.

The incidence of accidental haemorrhage in this series was 0.47%, compared to the overall hospital incidence of 1.07%.

As shown in Table V, 63.3% had a natural delivery with episiotomy and 18.1% delivered naturally, as compared to the overall hospital incidence which was 53.2% and 32.3% respectively. The incidence of caesarean section was 7.72% in teen-age pregnancy, whereas the overall hospital incidence was 9.6%. The incidence of forceps and vacuum in teen-age pregnancy was 8.2%, and the overall hospital incidence being 4.5%.

The main indication for caesarean section in the teen-age group was cephalopelvic disproportion constituting 47.2%

TABLE III

	Teen-age Pregnancy		Hospital series	
	No. of cases	%	No. of cases	%
Abortions	228	12.1	1517	12.87
Vesicular mole	9	0.48	53	0.45
Ectopic	2	0.1	44	0.37

TABLE IV

	Pre-eclamptic Toxaemia		Eclampsia		Total	
	No. of cases	%	No. of cases	%	No. of cases	%
RSRM Hospital series	306	2.55	118	1	424	3.55
Teen-age pregnancy	187	9.9	34	1.8	221	11.7

TABLE V  
Mode of Delivery

	Teen-age Pregnancy		Hospital incidence	
	No. of cases	%	No. of cases	%
1. Natural with episiotomy	1040	63.3	6289	53.2
2. Natural	297	18.1	3826	32.3
3. L.S.C.S.	127	7.72	1134	9.6
4. Vacuum	50	3.04	195	1.6
5. Forceps	86	5.2	344	2.9
6. Assisted breech delivery	42	2.55	233	1.98

of all indications. In the hospital series the indication was 20% for cephalopelvic disproportion.

As shown in Table VI, 28.3% of teen-age mothers had low birth weight babies, as compared to the overall hospital incidence of 18.2%. The average birth weight for teen-age group was 2.67 kg, which compares well with the hospital figure of 2.7 kg.

TABLE VI  
Birth Weight

	No. of cases	%
2-2.4	130	7.9
2 kg	335	20.4
2.5-2.9	804	48.9
3. -3.4	324	19.7
3.5 and more	62	3.8

As shown in Table VII, 1.09% of patients had congenital malformations. The perinatal mortality rate for the teen-age group was 42/1000, when compared to the hospital figure of 72/1000.

TABLE VII  
Incidence of Congenital Malformations

	No. of cases	%
RSRM Hospital series	90	0.78
Teenage	18	1.09

### Discussion

The incidence of teen-age pregnancy between the ages of 13-19 years in our series was 15.7%. In Sengupta's series the incidence of teen-age pregnancies between the ages of 13 and 19 years was 20.1%.

The majority of patients in our series were unbooked, belonging to Class IV socio-economic group and having very poor nutritional status. Adolescence is a period of rapid growth, and therefore the adolescent girl has increased nutritional demands. So, in an adolescent girl, pregnancy places additional nutritional demands. The end result being a severe degrees of anaemia in the mother, a higher incidence of prematurity and a low birth weight.

Eventhough the incidence of caesarean section is lower than the over all hospital incidence, the incidence of caesarean for cephalopelvic disproportion is much higher in teen-age pregnancy than the hospital series. The higher incidence of pelvic inlet contraction in the younger teen-age group suggests that the bony pelvis has not reached its potential size at the time of delivery. The incidence of forceps and Vacuum are also higher in the teen-age group.

On persuing the literature most

authors have reported an increased incidence of pregnancy induced hypertension in teen-age pregnancy. In Hassan's series it was 8.8% Johann's series 35% and in RSRM series its was 11.7%. Hassan believes that the higher rate of toxæmia in the teen-age pregnancy is probably related to the immaturity of the maternal organism in relation to pregnancy changes. Increased hormonal and metabolic activity may also be responsible.

In most series the perinatal mortality rate was higher than the hospital perinatal rate. In Hassan's series the perinatal mortality rate was 25/1000, whereas the hospital perinatal rate was 19.8/1000. In RSRM series the results were contrary to the above. The perinatal mortality rate for teen-age group was 42/1000 and the overall perinatal rate was 72/1000.

In Hassan's series the incidence of Congenital malformation in teen-age group

was 0.63% and that of hospital was 1.3% whereas Davis and Potter found that there was increased incidence of Congenital malformation born to mothers under 20. He states that there is a possibility of more anomalies in reproduction immediately after puberty.

In our series 1.08% of patient had congenital malformations in teen-age pregnancy and the overall hospital incidence being 0.78%.

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