MATERNAL AND PERINATAL OUTCOME IN ADOLESCENT PREGNANCY
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ABSTRACT

BACKGROUND
Adolescence is a period of transition from childhood to adulthood extending from 11-19 years. Adolescent pregnancy is a high-risk situation because of psychological and physical immaturity. The study was undertaken to analyse the various aspects of pregnancy and labour in the adolescent mother and also to assess perinatal outcome.

MATERIALS AND METHODS
It was a one year clinical analytical study carried out in DM-WIMS. All the adolescent pregnant mothers admitted in the third trimester were included in the study irrespective of gravidity and parity. The cases were followed up in terms of details of delivery, pregnancy complications and perinatal outcome.

RESULTS
There were 124 cases of teenage pregnancy in third trimester out of 1006 deliveries (12.3%). Of the adolescent pregnancies, 98.04% were in 17-19 years age group. 99.8% of adolescent pregnancies occurred in married women. 91.53% of the adolescent pregnant women were primigravidas. 10% of adolescent mothers were admitted before term owing to detection of high-risk conditions like severe PIH, preterm labour, PPROM. 88.6% had vaginal delivery, 11.4% delivered by LSCS. 19.02% of cases had low birth weight infants. 35% of these babies needed admission during perinatal period.

CONCLUSION
Incidence of adolescent pregnancy was 12.3%. Teenagers were seen to have a higher need for counselling regarding nutrition, hygiene, breastfeeding and contraception. Course of labour was not seen to be significantly affected by age alone. Perinatal outcome was also good in these patients though there were a few avoidable admissions due to poor feeding techniques and decreased sense of responsibility.

KEYWORDS
Adolescent Pregnancy, Pregnancy Complications, Course of Labour, Perinatal Outcome.

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BACKGROUND
Teenage pregnancies are on the rise in the developed world (McLeod A.).¹ In India, it is either seen in the higher socioeconomic strata due to increase in sexual intercourse as a result of liberalisation of the society or it is seen in rural India where early marriage is still prevalent and use of family planning measures are limited. Major problems encountered in teenage pregnancy are that the mother is not prepared physically, mentally and emotionally for a pregnancy. Also, it may be associated with adverse perinatal outcome such as low birth weight, preterm delivery and SGA birth.²,³

Repeated studies including those in our population have shown that adolescents lack correct information about reproduction. Teenagers also have very little knowledge about growth and development of infants and children. Management options include primary prevention, which focus on preventing pregnancy through sexual education in schools with an emphasis on family planning and related matters.⁴,⁵

Secondary prevention is directed at sexually active women through a flexible approach towards the use and provision of contraceptives. Tertiary prevention involves adolescents who become pregnant. They are encouraged to seek early, appropriate and adequate antenatal care. There are usually no specific problems in the intrapartum management of teenage pregnancies. Complications of adolescent pregnancies show a consistently poorer pregnancy performance if age of mother is less than 15 years and also if she is a teenage multigravida. Depression screening for young mothers is critical. A high percentage of teenage mothers suffer from postpartum or major depression.⁶ The special needs of pregnant teenagers are mainly in three areas; 1) Education for family life. 2) Meeting nutritional needs. 3) Contraception.

Parenthood calls for a degree of maturity that is often far beyond the capability of most teenagers. Knowledge should
be imparted on how unplanned pregnancy can be avoided through premeditated use of effective contraceptive measures.7

Nutritional inadequacies are to be expected in adolescents especially from low income background. Maternal malnutrition is implicated as a cause of premature labour, abruptio placenta and low birth weight babies. King JC and Jacobson HM 8 suggested that provision of adequate nutrition for pregnant teenagers is complicated by the fact that precise nutritional allowances are not been definitely established, only approximations can be used. Commonly, the allowance for pregnant adults is added to the National Research Council suggested allowance for nonpregnant teenagers.9,10

For women who have a child before the age of 15 years, the completed family life is nearly four children. 1.3 times longer than for women who delay child bearing until 20-24 years.11,12,13 Contraceptive methods to be encouraged include the use of low dose combined oral contraceptive pill, Barrier methods and intrauterine devices.

According to Joy D Osofsky and Howard J Osofsky,14 infants born from teenage pregnancies appear to have a considerably worsened prognosis due to both maternal reasons as well as increased incidence of infections and other illnesses in the first year of life. Preschool children of adolescent mothers have been shown to experience higher rates of delayed cognitive ability, more behaviour problems, more aggressive and less impulse control.15 20 year follow up of Baltimore study showed higher rates of school dropout, depression and incarceration. It is also possible that the incidence of major and minor congenital anomalies is increased in the newborn of undernourished mother.16,17,18,19,20

AIMS AND OBJECTIVES
The study was undertaken to analyse the various aspects of pregnancy and labour in the adolescent mother and also to assess perinatal outcome.

The data was analysed as-
1. Incidence of adolescent pregnancy.
2. To analyse the special aspects of problems in these women.
3. To study the course of labour.
4. To identify problems at variation with present concepts.
5. To assess the perinatal outcome.

MATERIALS AND METHODS
It was a 1 year clinical analytical study carried out in DM-WIMS.

Inclusion Criteria
1. All adolescent pregnant women admitted in this 1 year in our hospital irrespective of gravidity and parity.
2. Only cases in 3rd trimester were included in the study.

Exclusion Criteria
1. All first and second trimester complications in the adolescent group were excluded in the study.
2. All cases of adolescent pregnant women admitted in third trimester for reasons other than delivery like urinary infection, false labour pain, etc. were excluded from the study.

The cases were followed up in terms of details of pregnancy complications, details of delivery and perinatal outcome.

RESULTS
There were 124 cases of teenage pregnancy in third trimester out of 1006 deliveries (12.3%).

Out of the adolescent pregnancies, 98% were in 17-19 years age group and 2% of pregnancies were in the less than 17 years age group (Figure 1).

99.8% of adolescent pregnancies occurred in married women. 91% of the adolescent pregnant women were primigravida. Second gravida and third gravida were 8% and 1% respectively (Figure 2).

10% of adolescent mothers were admitted before term owing to detection of high-risk conditions like severe PIH, preterm labour, PPROM.
10% of adolescent mothers were admitted before term owing to detection of high-risk conditions like severe PIH, preterm labour, PPROM. 88% had vaginal delivery, 12% delivered by LSCS (Figure 5).

19.66% of cases had low birth weight infants (Figure 6).

<table>
<thead>
<tr>
<th>Cause</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meconium aspiration</td>
<td>26.6</td>
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<tr>
<td>Birth asphyxia</td>
<td>16.37</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>14.99</td>
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<tr>
<td>High risk for sepsis</td>
<td>12.04</td>
</tr>
<tr>
<td>Poor suck/hypoglycaemia</td>
<td>10.98</td>
</tr>
<tr>
<td>Hyperbilirubinaemia</td>
<td>10.35</td>
</tr>
<tr>
<td>Natal aspiration</td>
<td>8.02</td>
</tr>
<tr>
<td>Subgaleal haematoma</td>
<td>0.63</td>
</tr>
</tbody>
</table>

DISCUSSION

There were a total of 124 cases of teenage pregnancies admitted out of a total of 1006 deliveries in our institute. 98% of the teenagers are in the 17-19 year age group. Also, 99.67% of the pregnancies occurred in married women. This was in sharp contrast to a study by the University of Tennessee were only 52% were above 17 years of age and 81.5% of pregnancies were in the unmarried group. This can be attributed to the early age of marriage, cultural and moral values in the study group. But, what was alarming was that 7.7% it was a second pregnancy. This was in conjunction with the conclusion of McGrew MC that if effective contraception was not adopted, 60% of teenagers who give birth before the age of 17 will have a repeat pregnancy before age of 19.

What was common to all these pregnant women was that in the vast majority, pregnancy was not planned. It occurred as a result of early age of marriage. The majority had no knowledge about contraceptive use and fertility period. It was heartening to see that the majority had antenatal check-up periodically.

Regarding pregnancy complications, incidence of preterm labour was 10%, which was not significantly different from the general population. 13.75% of mothers had hypertension in pregnancy. Surprisingly, there were 0.54% of pregnancies with previous caesarean section who had embarked on their repeat pregnancy within 2 years of the first child. This reflects poor awareness and poor acceptance of family planning measures.

Course of labour was studied. Gross levels of cephalopelvic disproportion due to immature pelvis and physiological causes as is theoretically proposed were not noted in the study. Latent phase, active phase and second stage abnormalities in the teenagers were found to be not much different from the figures proposed by Friedman for the general population. Actually, it was seen that teenagers in labour were more willing to cooperate and obey orders.

35% of babies had NICU admissions in the first week of birth, the majority due to meconium aspiration, birth asphyxia and low birth weight. But, it was also surprising
that a large number of NICU admission were due to complaints of poor suck and hypoglycaemia due to retracted nipples, improper feeding techniques or the mother simply not being able to understand the needs of the baby. This supports the observation by Luella Klein that parenthood calls for a degree of maturity that is far beyond the capability of most teenagers.

CONCLUSION
The following conclusions were drawn from the study:
1. Incidence of adolescent pregnancy was seen to be 12.3%.
2. Areas of special attention in these women were analysed.
   - Teenagers need to be counselled regarding their nutrition and hygiene. Though antenatal care was good in the majority, it was seen that the multiparous teenager had little antenatal care.
   - Education regarding contraception should be made more widely available so that the first pregnancy is delayed and in an already pregnant teenager, postnatal contraception should be discussed at least by the 3rd trimester of the pregnancy so that she will be encouraged to accept it and plan her family accordingly. Advice regarding breastfeeding and its importance should be emphasised.
3. The course of labour was not seen to be significantly affected by the fact that they were teenagers alone. Actually, the teenagers were noted to be more cooperative to commands.
4. The perinatal outcome was also good in these patients, though there were a few avoidable admissions to the NICU due to poor feeding techniques and decreased sense of responsibility. Also, low birth weight babies were seen to be nearly 20%, which has to be further brought down. Here, the stress has to be laid on nutrition, timely antenatal care and spacing in a parous woman.

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REFERENCES