

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20185412>

Original Research Article

Study of maternal and neonatal outcome in teenage pregnancy

Sharvari Mundhe*, Varsha Patil, Divya Saha

Department of Obstetrics and Gynecology, Grant Government Medical College, Mumbai, Maharashtra, India

Received: 19 September 2018

Accepted: 20 November 2018

***Correspondence:**

Dr. Sharvari Mundhe

E-mail: sharvee1411@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Teenage is a period of transition from childhood to adulthood. According to WHO, the period of teenage extends from 11-19 years. The objective of the present study was to find out the incidence and to evaluate the effect of pregnancy in teenage girls (13-19 years) and its maternal and neonatal outcome.

Methods: Prospective observational cohort study, the duration from 1st January 2016 to 31st July 2017.

Results: 216 teenage patients were studied; however medical termination and abortions were excluded as the study includes both maternal & neonatal outcome. 3944 pregnant patients were admitted for delivery and abortion related care. Out of this, pregnant adolescents were 216. Proportion of adolescent pregnancy was 5.47%. 170(78.7%) were booked, 32 (14.81%) were unmarried, while 50 (23.1%) were literate. Primigravida were 189 (87.5%) & multigravida was 27 (12.5%). 39 (18.05%) were Anemic, Preterm labour occurred in 14 (6.5%) & PROM occurred in 41 (18.9%) patients. Preeclampsia and Eclampsia occurred in 27 (12.5%) and 14 (6.5%) respectively. There were 176(81.48%) normal vaginal deliveries. 36 (16.66%) had Lower Segment Caesarean Section; commonest indication being Cephalopelvic disproportion (25%) & 4(1.85%) were instrumental deliveries 53 (24.3%) babies required admission at Neonatal Intensive care unit. Low Birth weight babies were 15 (28.3%).

Conclusions: - Early ANC registration and good antenatal care with effective intrapartum & postpartum monitoring along with contraceptive advice on discharge help reduce maternal and neonatal morbidity & mortality associated with teenage pregnancy. However, it is evident that teenage pregnancy rates could be reduced by effective measures like sex education in schools, community-based programs, widespread awareness about contraception.

Keywords: Anemia, Preterm, Teenage pregnancy

INTRODUCTION

Teenage pregnancy represents a high-risk group in reproductive terms because of the double burden of reproduction and growth. Some important factors have strongly influenced the teenage pregnancy rate in recent decades. The first factor is the declining age of menarche. The second factor is the first sexual activity, initiated at a much younger age. The third factor is the low usage of contraception.¹ In India, although the legal age at marriage is 18 for females and 21 for males, early marriage continues to be the norm (by age 15 as many as

26% of females are married). By the age of 18, this figure rises to 54%. Most reproduction in India occurs within marriage, so the low age at marriage automatically links to early onset of sexual activity, and thereby fertility.² According to UNICEF, worldwide every 5th child is born to a teenage mother. Worldwide 13 million births each year occur to younger than 19 years girls. The incidence of teenage pregnancies varies dramatically between different countries.³ Approximately 90% of the teenage births occur in developing countries. Nevertheless, there is also a significant variation in teenage pregnancy and birth rates between developed countries, although the

teenage pregnancy and birth rate are significantly lower in developed than in developing countries.⁴ In India, abortion was legalized in 1972 but the number of illegal providers of abortion services is very high and among unmarried adolescents the number of abortions in unhygienic conditions by unlicensed practitioners is estimated to be considerable. Teenage mothers are more likely to have children with low birth weight, inadequate nutrition and anaemia. And they are more likely to develop cervical cancer later in life. Early motherhood can affect the psychosocial development of the infant. The occurrence of developmental disabilities and behavioural issues are increased in children born to adolescent mothers. Pregnancy in this age group adds to the national hazards by contributing to population explosion especially in our country.

METHODS

This is a prospective study of feto-maternal outcome in teenage pregnancy. The study was carried out in Department of Obstetrics and Gynecology of tertiary care hospital, after the approval of college ethical committee between 1st January 2016 to 31st July 2017.

All patients coming to the OPD were screened for teenage pregnancy. All patients <20 years of their age (at the time of delivery) were taken into the study group and evaluated for the results supporting teenage pregnancy and its foetal and maternal outcome and the complications were studied in detail. 216 teen mothers were studied. The patients who aborted spontaneously or undergone medical terminal of pregnancy were excluded in this study.

Inclusion criteria

- All patients <20 years of age who attend the ANC clinic-booked, unbooked and referred in JJ Hospital.
- All patients whose age can be confirmed by any of the age proof document.

Exclusion criteria

- All patients who do not have any age proof document.

RESULTS

3944 pregnant patients were admitted for delivery and abortion related care. Out of this, pregnant adolescents were 216. Proportion of adolescent pregnancy was 5.47%. 170 (78.7%) were booked, 32 (14.81%) were unmarried, while 50 (23.1%) were literate. Primigravida were 189 (87.5%) and multigravida was 27 (12.5%). 39 (18.05%) were Anaemic, Preterm labour occurred in 14 (6.5%) and PROM occurred in 41 (18.9%) patients. Pre-Eclampsia and Eclampsia occurred in 27 (12.5%) and 14 (6.5%) respectively (Table 1).

Table 1: Complications.

Complications	Cases	Percentage
Anemia	39	18.05
Preterm	14	6.5
Pre-eclampsia	27	12.5
Eclampsia	14	6.5
IUGR	10	4.6
PROM	41	18.9
Oligohydraminos	8	3.7
Multiple pregnancy	1	0.4
Polyhydraminos	1	0.4

There were 176 (81.48%) normal vaginal deliveries. 36 (16.66%) had Lower Segment Caesarean Section; commonest indication being Cephalopelvic disproportion (25%) and 4 (1.85%) were instrumental deliveries (Table 2).

Table 2: Mode of delivery.

Mode of delivery	Cases	%
Vaginal	176	81.48
LSCS	36	16.66
Instrumental	4	1.85

Incidence of anemia in our study was 18.05% which was similar to other studies like Soubhagya Talawar, et al 2012-30%.⁵ Ibrahim Isa Ayuba et al 22.9%.⁶ Incidence of PROM was 18.9% which was similar to Pun KD, Chauhan M that was 29% and Nill F that was 26.5%. In our study, rate of vaginal delivery was 81.48% that was higher than LSCS rate of 16.66%.^{7,8} Similarly, Aiste Ugianskiene, et al had vaginal delivery rate 80.6% more than LSCS 33.33%.⁹ 53 (24.3%) babies required admission at Neonatal Intensive care unit. Low Birth weight babies were 15 (28.3%) followed by Preterm 14 (26.5%), Meconium aspiration syndrome and Respiratory distress each 6 (11.3%) (Table 3). Incidence of LBW in Rajal V Thaker, et al was 17.1%.¹⁰

Table 3: Reason for NICU admission.

Reason for NICU admission	Cases	Percentage
Preterm	14	26.4
LBW	15	28.3
MAS	6	11.3
RD	6	11.3
PROM	9	17.0
IUGR	2	3.8
Congenital anomaly	1	1.9

DISCUSSION

Teenage pregnancy represents a high-risk group in reproductive terms because of the double burden of reproduction and growth. The combination of poor nutrition and early child bearing expose young women to

serious health risks during pregnancy and childbirth, including damage to the reproductive tract, pregnancy related complications, such as anaemia, preeclampsia, preterm labour, cephalopelvic disproportion, perinatal and neonatal mortality, and lowbirthweight.¹¹

Muzaffer Timur et al conducted a study with adolescent and reproductive aged 3163 pregnant women, among them 1314 were teenagers which contributes to about 6.4%.¹² Our study includes 216 cases of teenage mothers, out of 3944 total females that attended the ANC clinic/ referred from other centers. Incidence was 5.4%. Majority of the teenage mothers were of the age group 16-19yrs (n=201) (93.05%). Booked were 170 (78.7%). Majority of the teenagers had a BMI ranging in the group of 19-24 i.e. 50% (n=108).

Out of 216 teenage mothers, 166 were found to be illiterate, that accounted for 76.8%. Out of the 216 cases, majority of them were primigravida (n=189) 87.5% and 12.5% (n=27) were multigravida. 81.48% (n=176) underwent normal vaginal delivery followed by LSCS i.e. 16.66% (n=36) and Instrumental delivery accounted for 1.85% (n=4). Incidence of vaginal delivery was 88.38% more than LSCS 11.62% in the study done by Yasmin G et al 2014.¹³ Among the complications Anemia was 18.05%, Pre-Eclampsia was 12.5% and Eclampsia was 6.5%, PROM was 18.9%, Preterm delivery was 6.5%.

Incidence of Oligohydraminos was 3.7% and polyhydraminos 0.4% was in our study. Cephalo-pelvic disproportion was the most common indication for LSCS i.e. 25% followed by Pre-eclampsia and Eclampsia (22.2%), Prolong PROM (22.2%), Malpresentation (11.1%) and Fetal distress (11.1%), Oligohydraminos (8.3%). Out of the 53 babies that went to NICU, the commonest reason for admission was found to be Low Birth Weight (28.3%) % which was similar to Nill F et al 2002 that was 32%, followed by Preterm(26.4%), PROM (17%), Respiratory distress(11.3%), Meconium aspiration syndrome(11.3%), IUGR(3.8%), Congenital Anomaly (1.9%).¹⁰

CONCLUSION

Proper antenatal care, institutional delivery and postnatal care help in reducing maternal and perinatal morbidity and mortality in adolescent pregnancy. Prevention of adolescent pregnancy can be achieved by proper education of girl child, marriage at legal age, prevention of unwanted pregnancy along with proper health and sex education to both boys and girls irrespective of whether they live in rural or urban areas.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Wyshak G, Frisch RE. Evidence for a secular trend in age of menarche. *New Eng J Med.* 1982;306(17):1033-5.
2. *National Journal of Community Medicine.* 2013;4(3):369-549.
3. UNICEF. A league table of teenage births in rich nations: Innocenti Report Card No. 3: The United Nations Children's Fund. Florence, Italy: Innocenti Research Centre. 2001.
4. Singh S, Tunick B. *Risks and Realities of Early Childbearing Worldwide.* Alan Guttmacher Institute. 1997.
5. Talawar S, Venkatesh G. Outcome of teenage pregnancy. *IOSR-JDMS.* 2013;6(6):81-3.
6. Ayuba II, Gani O. Outcome of teenage pregnancy in the Niger delta of Nigeria. *Ethiopian J Health Sci.* 2012;22(1):45-50.
7. Pun KD, Chauhan M. Outcomes of adolescent pregnancy at Kathmandu University Hospital, Dhulikhel Hospital. *Kathmandu Univ Med J.* 2011;33(1):50-3.
8. Nili F, Rahmati MR, Sharifi SM. Maternal and neonatal outcome in teenage pregnancy in Tehran Valiasr Hospital. *Acta Medica Iranica.* 2002;40(1):55-9.
9. Ugianskiene A, Ledertoug S, Murrekilde P, Bor IP. Teenage pregnancies: Obstetric and neonatal outcomes at a Danish Regional Hospital. *InNFOG* 2014;4(7).
10. Thaker RV, Panchal MV, Vyas RC, Shah SR, Shah PT, Deliwala KJ. Study of feto-maternal outcome of teenage pregnancy at tertiary care hospital. *Gujrat Med J.* 2013;68(2):45-8.
11. Mahavarkar SH, Madhu CK, Mule VD. A comparative study of teenage pregnancy. *J Obstet Gynaecol.* 2008;28(6):604-7.
12. Temur M, Budak Ş, Kılıç Öztürk Y, Kaya C, Özün Özbay P, Yılmaz Ö. Unintended obstetric and neonatal consequences of adolescent pregnancies. *J Tepecik Edu Res Hospital.* 2016;26(2):93
13. Yasmin G, Kumar A, Parihar B. Teenage pregnancy- its impact on maternal and fetal outcome. *Int J Sci Study.* 2014;1:9-13.

Cite this article as: Mundhe S, Patil V, Saha D
Study of maternal and neonatal outcome in teenage pregnancy. *Int J Reprod Contracept Obstet Gynecol* 2019;8:148-50.