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RESEARCH ARTICLE

A RETROSPECTIVE STUDY OF INCIDENCE OF TEENAGE PREGNANCY IN TERTIARY CARE CENTER-MATERNAL AND FETAL OUTCOME

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Abstract

Teenage pregnancy is becoming a high risk to the health of mother and child due to its adverse outcomes to both mother and the child.it is common health problem around the world. It is one of the key issues concerning to the reproductive health of women not just in developing countries but also in developed countries. Pregnancy among teenagers is considered high risk due to its high incidence of adverse outcomes like LBW, prematurity, neonatal asphyxia, sepsis, jaundice, mortality, maternal anemia, preeclampsia(PE) , maternal mortality, etc. purpose of this article is to known the incidence of teenage pregnancy in tertiary care center, maternal and fetal outcome by which we can give awareness to public regarding the outcome come of teenage pregnancy, improve reproductive results , decrease the teenage pregnancy by ensuring female education, and enforcing marriage law.

Introduction:-

Teenage pregnancy is said to pregnancy occurring at the age between 10years to 19years. Adolescence (WHO)-the period of human growth and development after childhood and before adulthood (10-19yrs). Global incidence of 1in 4girls are teenage mothers. 13 million children born to females under 20yrs according to "SAVE CHLIDREN ORGANISATION" world wide and >90% in developing countries. Highest incidence of teenage pregnancy in world in sub Siberian Africa.

In India ,8% in 2015-16 **,7%** in 2019-21, 16% in 2005-06 are the incidence teenage pregnancy according to national family and health services(NFHS-3). According to NFHS -5 7% of age 15-19yrs have begun child bearing,5% have live birth and 2% with first child.

Adolescent fertility rate world wise estimated to be 55.3% for 2000-2005 means average of 5.5% of adolescents give birth each year. Adolescent pregnancy is high risk group as outcome is unsatisfactory when compared to general population.

A major issue for the pregnant teen relates to her own body, and degree of both physical and emotional development achieved during the pubertal procedure. The incomplete development of genital tract and musculoskeletal system of pregnant teens worsens the overall obstetrical outcome. Maternal complications like anemia, preeclampsia,

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eclampsia, preterm, increased incidence of abortions, increased incidence of cesarean section, instrumental deliveries. Fetal complications like preterm deliveries, low birth weight, neonatal sepsis, neonatal jaundice, increased incidence of NICU admission.
Moreover, complications of pregnancy may lead to increased maternal mortality in teens compared to adult women, in addition to this mortality , pregnancy in teens induce psychological stress ,particularly in unwanted pregnancy.

Risk factors for teenage pregnancy like lack of knowledge on sexuality education, lack of awareness and access to contraception, lower socioeconomic status ,gender inequality , social deprivation, premarital sex, early age at marriage, sexual violence, mental health problem, poor transition from school to works at 16yrs of age , school drop outs. Recognition of the risk factors is the basis on which viable preventive programs can be developed, this article is about to known the incidence of teenage pregnancy in tertiary care hospital, maternal and fetal outcome , complications, thus bringing awareness about this teenage pregnancy and its complications to society and thus preventing then incidence of teenage pregnancy and its complications and thus finally decreasing the maternal and fetal mortality and morbidity.

Aims and Objectives:-

To know the incidence of teenage pregnancy .
To know the maternal and fetal outcome of teenage pregnancy.

Inclusive criteria:
Pregnant mothers of age 17-19 years of age.

Exclusive criteria:
Pregnant mothers more than 19 years of age.

Materials Methods:-

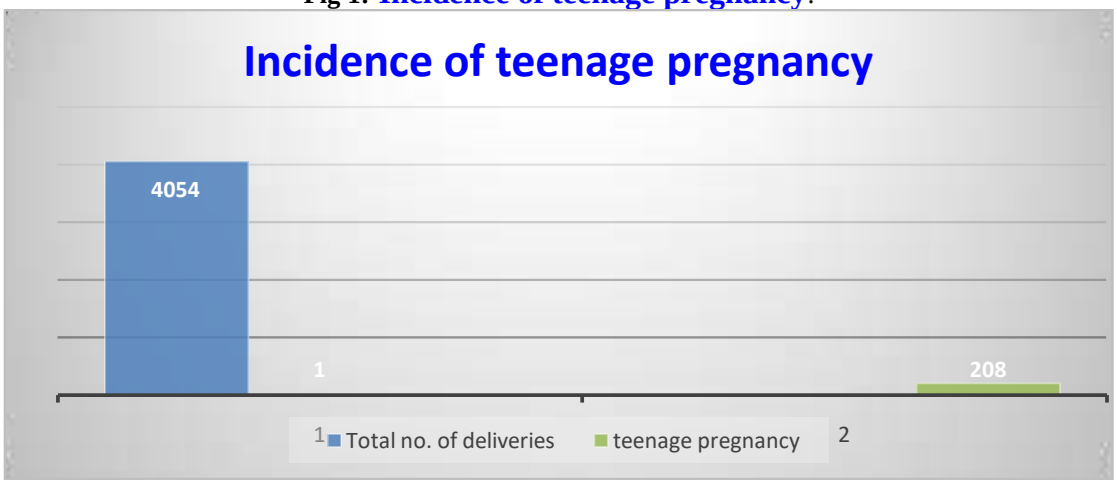
All pregnant mothers of age 17- 19 years of age admitted in Government medical college , Anantapuramu for period of 6 months from September 2022 to February 2023. Data collected from medical records storage department of government general hospital , Anantapuramu. Statistical analysis done by excel sheets prepared by collected data.

Results:-

Incidence Of Teenage Pregnancy:

In present studythere were 208 teenage mothers were admitted during the study period among the total obstetric admissions of 4054, giving an incidence of 5.12% of teenage pregnancy(Fig-1)

Fig 1:-Incidence of teenage pregnancy.



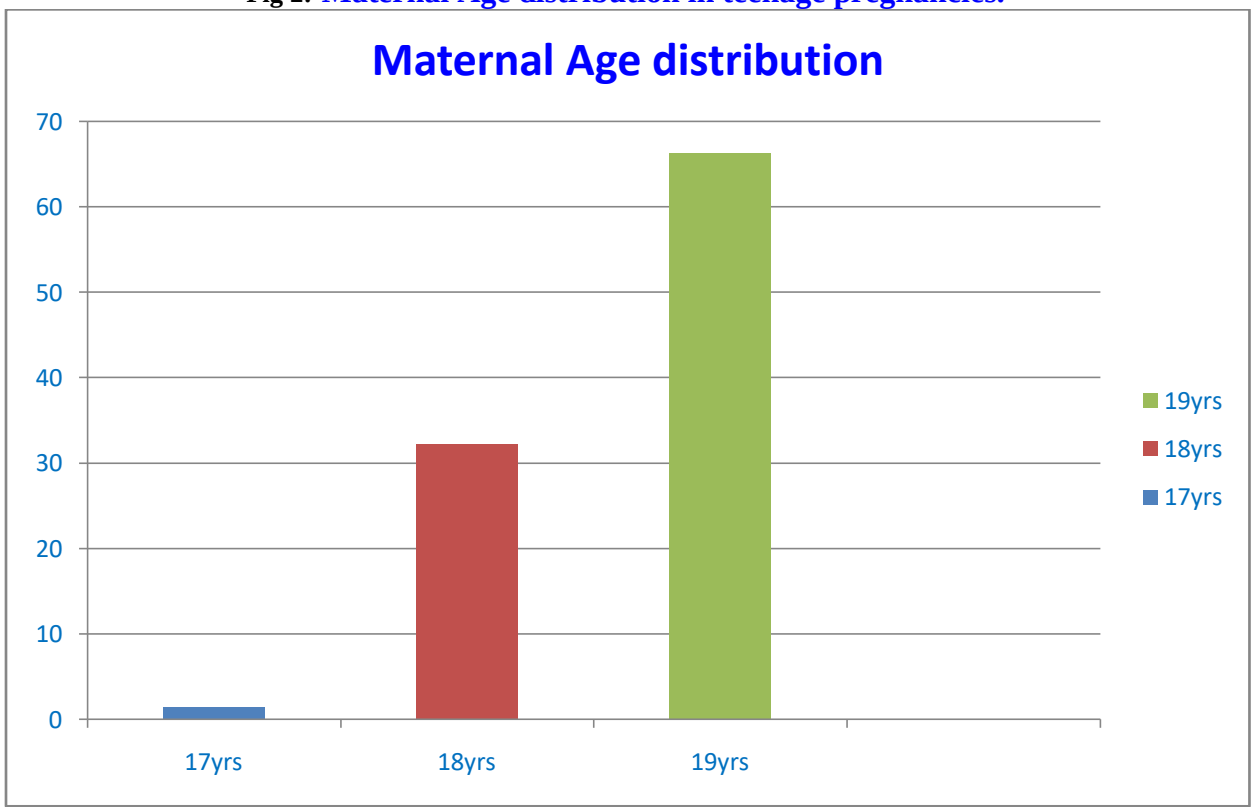
Age distribution in teenage pregnancy:

In present study, incidence of 17yrs were 3 in number with 1.44%,18yrs were 67 in number with 32.2% and 19yrs were 138 with highest percentage of 66.3%.(table-1),Fig 2

Table 1:- Maternal Age distribution in Teenage pregnancy.

AGE	PERCENTAGE
17yrs	1.44%
18yrs	32.2%
19yrs	66.3%

Fig 2:-Maternal Age distribution in teenage pregnancies.



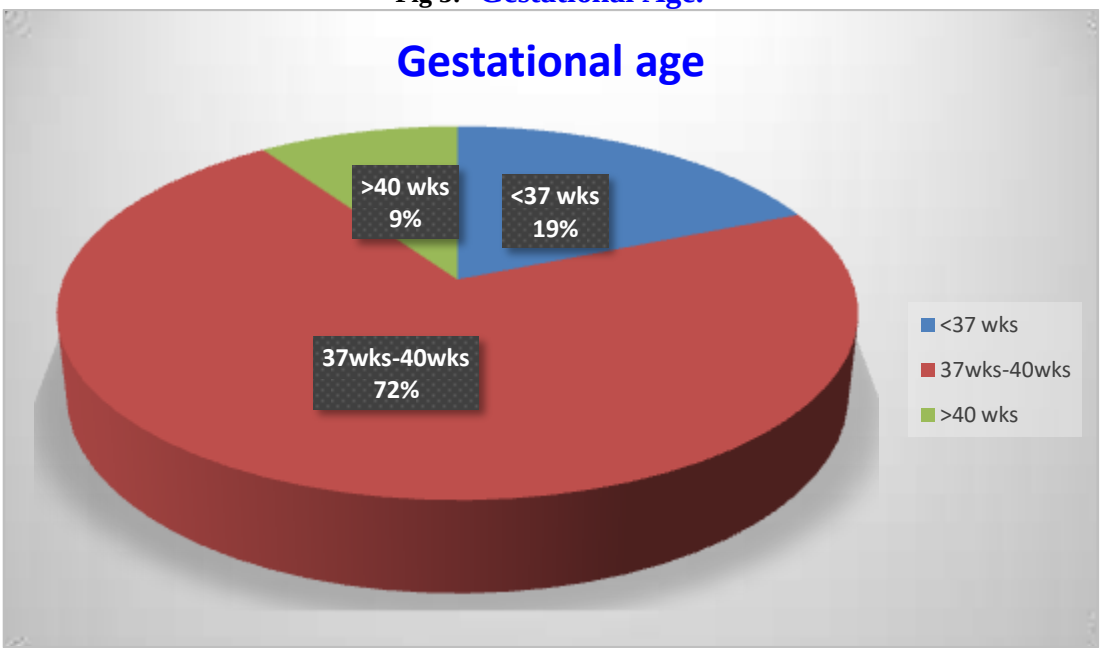
Distribution of gestational age in teenage pregnancy:

Distribution of gestational age in teenage pregnancy is like 18.75% are <37weeks of gestation, 71.63% are <40weeks and 9.6% of >40weeks. This shows that there is significant increase in percentage of preterm labour in teenage pregnancy thus leading to LBW, increased incidence of NICU admissions. In thus study there is also a significant percentage of post dated pregnancy also, thus leading to increase in weight of babies and increased obstetrical interventions and instrumental deliveries,this may also lead to IUGR babies and need of early interventions needed and incidence of LSCS also increased , NICU admission rate also increases.
Table 2 ,fig 3.

Table 2:- Distribution of gestational age in teenage pregnancy.

Weeks of gestation	Percentage
<37weeks	18.75%
37wks-40weeks	71.63%
>40weeks	9.6%

Fig 3:- Gestational Age.



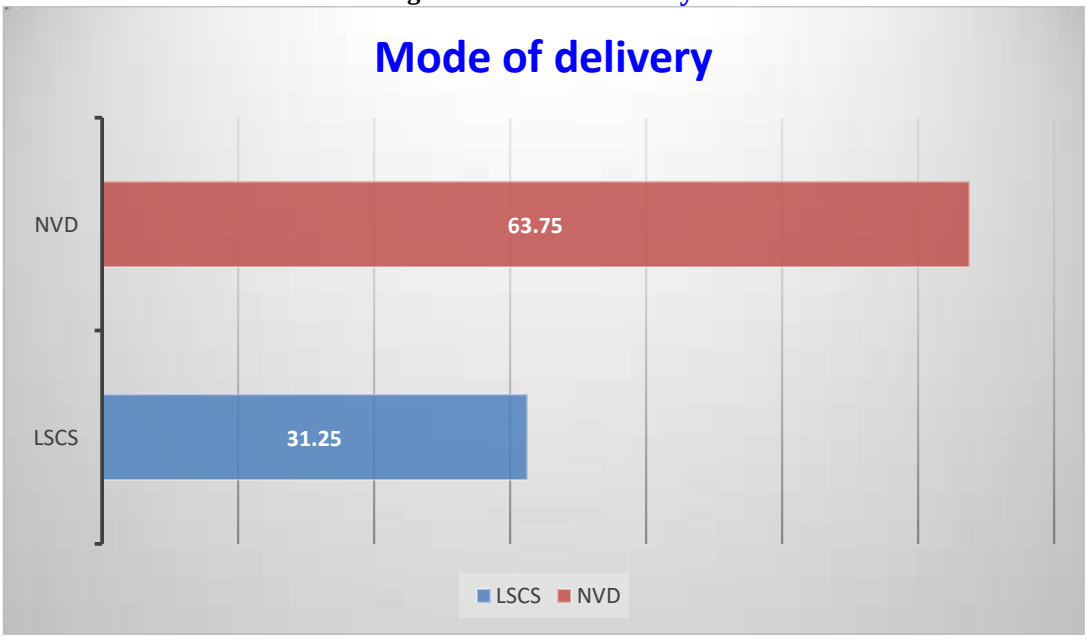
Mode Of Delivery In Teenage Pregnancy:

Though there is significant number of teenage pregnancies in this study there is more incidence of normal vaginal deliveries only of 63.75% and there is 31.25% of LSCS among teenage pregnancies due to incidence of preterm deliveries , IUGR and improper physical growth in teenage so lead to increased interventions while teenage pregnant mothers sets into labour. Table 3, fig 4

Table 3:-Mode of delivery.

Mode of delivery	Percentage
LSCS	31.25%
NVD	63.75%

Fig 4:- Mode of delivery.



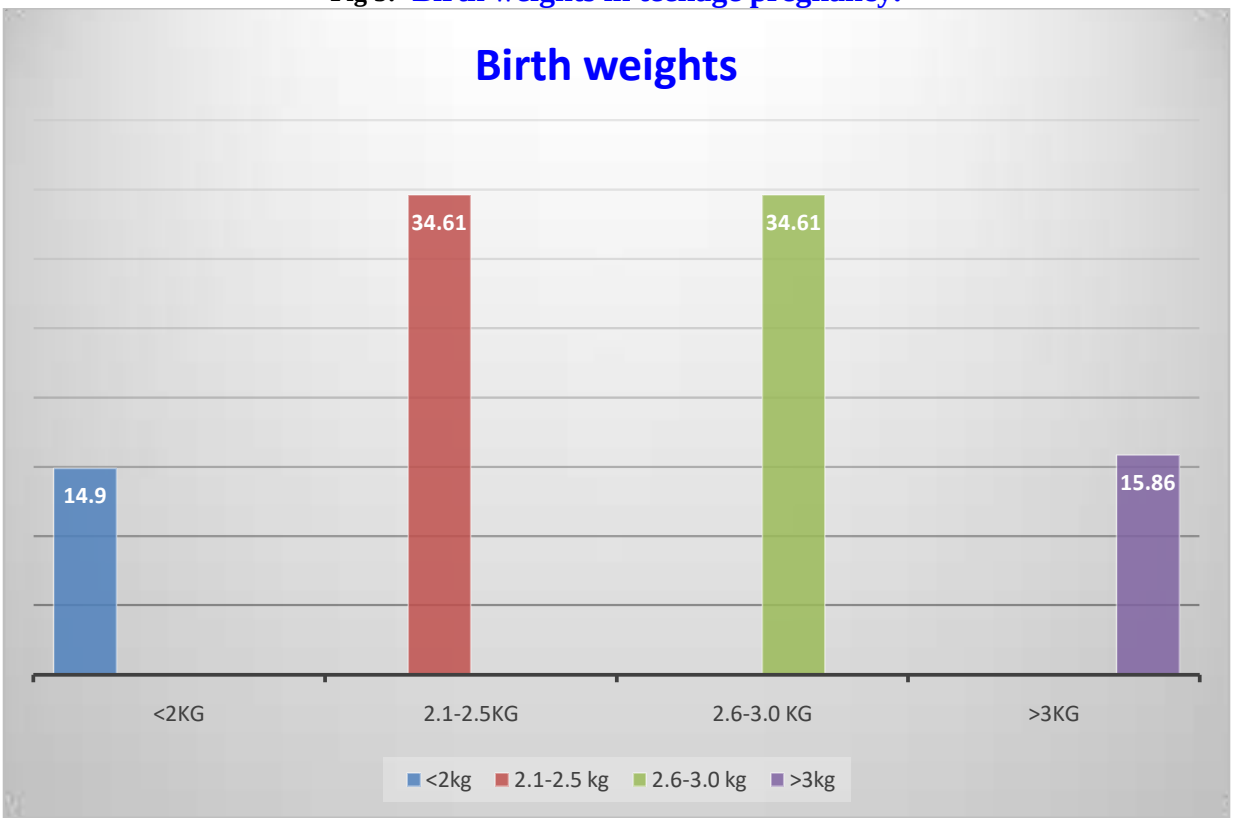
Birth weight in teenage pregnancy:

Teenage pregnancy affects the birth weight of babies as there will more chances for preterm deliveries and low birth weights. In this study incidence of birth weights is like this less than 2kg is 14.9%,2.1-2.5kg is 34.61%,2.6-3.0kg is 34.61% and more than 3kg is 15.86%. teenage pregnancy has more chances of hypertensive disorders thus may lead to LBW babies also. Reults shown in table 4,and fig:5

Table 4:- Birth weights in teenage pregnancy.

Birth weight(kg)	Percentage
<2	14.9
2.1-2.5	34.61
2.6-3.0	34.6
>3.0	15.86

Fig 5:- Birth weights in teenage pregnancy.



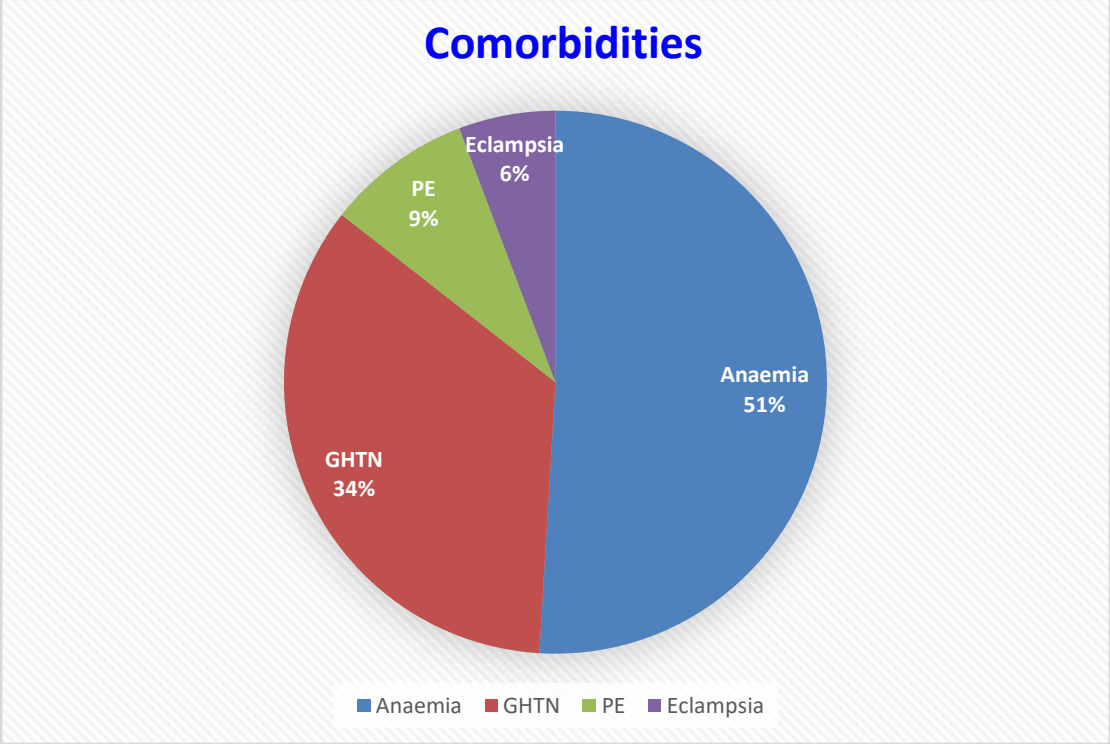
Comorbidities in teenage pregnancy:

Teenagepregnancy may be associated with some comorbidities like anemia, hypertensive disorders, malpresentations, oligohydramnios. Following table shows the incidence of comorbidities in teenage pregnancy.

Table 5:- Comorbidities in teenage pregnancy.

Comorbidity	Percentage
Anaemia	50.89
GHTN	34.6
PE	8.65
Eclampsia	5.76

Fig 6:-Comorbidities in teenage pregnancy.



Perinatal outcome:

Various perinatal outcomes noted in this study which include preterm deliveries (19%), NICU admissions (6.1%), LBW (49.5%), IUGR (6.25%), IUFD (1.92%).

Table 6:- Perinatal out come.

Perinatal complications	Percentage
Preterm birth	**19**
NICU	**6.1**
LBW	**49.5**
IUGR	**6.25**
IUFD	**1.92**

Discussion:-

Global incidence of 1in 4girls are teenage mothers. 13 million children born to females under 20yrs according to **"SAVE CHLIDREN ORGANISATION"** world wide and >90% in developing countries. Highest incidence of teenage pregnancy in world in sub Siberian Africa.

In India ,8% in 2015-16 **,7%** in 2019-21, 16% in 2005-06 are the incidence teenage pregnancy according to national family and health services(**NFHS-3**). According to **NFHS -5** 7% of age 15-19yrs have begun child bearing,5% have live birth and 2% with first child.

Adolescent fertility rate world wise estimated to be 55.3% for 2000-2005 means average of 5.5% of adolescents give birth each year. Adolescent pregnancy is high risk group as outcome is unsatisfactory when compared to general population.

In Okram et al, the study conducted in 2019 in India, majority of teenage pregnant women were primigravida accounting for 86%, and 14% were multigravidas ; this correlates with the current study ,here primigravida comprised 87.9%and multigravidas 12.1%; which was comparable with the study by Mahavarkar et al which showed a similar incidence of 86.85%.

Doddihal et al conducted a study on teenage pregnancy in a rural area of south India, which showed majority of teenage pregnancies end in term delivery accounting for 63.9%, and remaining are preterm deliveries 8. In our study incidence of term deliveries were high accounting for 81% and preterm deliveries were 19%. Inspite of the complications, teenage pregnancy still had higher number of term deliveries. In our study majority of teenage pregnancies were booked in our institution and hence this may be a contributing factor for good outcome of these pregnancies. The psychological instability/stress because of cultural, social, and economic factors in their living environment could be a possible reason for the preterm deliveries.

The incidence of hypertensive disorders as reported in other studies were as follows: 14.2% by Sharma et al, 10.6% by Sarkar et al and more than 13.05% by Padte et al.10-12. In our study the incidence of hypertensive disorders were more, accounting for 21%; out of this 34.6% were gestational hypertension(GTHN), 8.65% were preeclampsia(PE) and5.76% were eclampsia. Yasmin et al, conducted a study on teenage pregnancy which showed the incidence of hypertensive disorders to be 20.17%, which was similar to our study 9.

In the Yasmin et al study the incidence of anaemia was 8.12%. In the current study the incidence of anaemia was 79%. As pregnant teenagers often receive inadequate antenatal care, their anemia during labour and the postpartum period usually get worse. With proper antenatal checkups and follow-up teenage pregnancies can achieve better results like, anaemia correction antenatally with iron supplements. In developing countries more than 25% of teenage mothers were found to be anemic as revealed in studies conducted by Saxena et al, Bhalerao et al and Rahman et al.13-15 In contrast to it our study found a higher incidence of anaemia (5.5%).

In current study the percentage of women delivered by cesarean section were 31.25% which was high. Of the cesarean sections, cephalopelvic disproportion (CPD) was the major indication followed by fetal distress and malpresentations. The incidence of cesarean section among teenage mothers were reported 6% by Bhalerao et al, 34% by Mukhopadhyay and 26% by Dubashi.14-17 These studies also report fetal distress, CPD and contracted pelvis to be leading causes for cesarean section among teenage mothers like the present study.

In the current study the incidence of low birth weight is around 49.5%. Other Indian studies found the incidence of LBW babies between 33 and 39% 18. In the Yasmin et al study, the incidence of LBW is 16%, which was less than that of current study 9.The total number of NICU admission in our study was 6.1% which was higher when compared with Yasmin et al study which is 4.91% 9.The incidence of IUGR was 6.25% in the current study, which is as nearly less than that in Yasmin et al (8.4%) but was higher when compared with Saxena et al (5.5%).9,19

Conclusion:-

Teenage pregnancy may cause significant obstetric complications. In our study, a higher prevalence of hypertensive disorders, anaemia, preterm birth and low birth weight was found among teenage mothers. However, the cesarean section rate was found to be significantly higher. The associated factors explaining a higher incidence of adverse maternal outcomes among teenagers needs to be evaluated in further studies. Therefore, preventive programs and targeted antenatal care can be planned to prevent teenage pregnancies and its adverse outcomes. Teenage childbearing does not contribute to adverse maternal or fetal outcomes provided proper antenatal care, institutional delivery and postnatal care are given. Prevention can be achieved by education of the girl child and marriage at a legal age, providing knowledge on sexuality education, awareness and access to contraception, awareness on problems due to lower socioeconomic status ,gender inequality , social deprivation, premarital sex, early age at marriage, sexual violence, mental health problem, poor transition from school to works at 16yrs of age , school drop outs. Recognition of the risk factors is the basis on which viable preventive programs can be developed.

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Conflict of interest:
None declared.

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

References:-

1. World Health Organization, United Nations Population Fund: Married adolescents: no place of safety. Geneva: WHO-UNFPA; 2006. Available at: https://www.who.int/maternal_child_adolescent/docu ments/9241593776/en/. Accessed on 20 May 2020.
2. Adolescent pregnancy- Issues in adolescent health and development, WHO discussion papers on adolescence. WHO. 2004. Available at: https://apps.who.int/iris/bitstream/handle/10665/42903/9241591455_eng. pdf;jsessionid=648A574D208F84C9899C6C1C7DF18A80?sequence1. Accessed on 20 May 2020.
3. UNICEF. A league table of teenage births in rich nations. Innocenti Research Centre Florence. 2001. Available at: https://www.unicef-irc.org/publications/ 328-a-league-table-of-teenage-births-in-rich-nations. html. Accessed on 20 May 2020.
4. Mayor S. Pregnancy and childbirth are leading causes of death in teenage girls in developing countries. BMJ. 2004;328:1152.
5. National Family Health Survey:4 state fact sheet Andhra Pradesh. Available at: http://rchiips.org/nfhs/pdf/nfhs4/AP_Factsheet.pdf. Accessed on 20 May 2020.
6. Okram SD, Reddy KM, Samyukta BSCN, Sadvika P,Betha K. Prevalence of teenage pregnancy and pregnancy outcome at a rural teaching hospital in India. Int J Reprod Contracept Obstet Gynecol. 2019;8:613-6.
7. Mahavarkar SH, Madhu CK, Mule VD. A comparative study of teenage pregnancy. Am J Obstet Gynecol,2008;28(6):604-7.
8. Doddihal CR, Katti SM, Mallapur MD. Teenage pregnancy outcomes in a rural area of South India: A Madala VRK et al. Int J Reprod Contracept Obstet Gynecol. 2020 Oct;9(10):3989-3993 .International Journal of Reproduction, Contraception, Obstetrics and Gynecology Volume 9 · Issue 10 Page 3993 prospective study. Int J Med Public Health. 2015;5:222-4.
9. Yasmin G, Kumar A, Parihar B. Teenage Pregnancy - Its Impact On Maternal And Fetal Outcome. Int J Scientific Study. 2014;1(6):9-13.
10. Sharma KA, Verma K, Khatri S, Kannan AT. Determinants of pregnancy in adolescents in Nepal. Ind J Pediatr. 2002;69(1):19-22.
11. Sarkar CS, Giri AK, Sarkar B. Outcome of teenage pregnancy and labour: a retrospective study. J Indian Med Ass. 1991;89:197-9.
12. Padte K, Pal MN, Pavse J. Review of teenage pregnancy in Goa. J Obstet Gynaecol India. 1989;39:472-4.
13. Saxena P, Salhan S, Chatopadhyay B, Kohli MPS, Nandan D, Adhish SV. Obstetrics and perinatal outcome of teenage and older primigravidas – A retrospective analysis. Health and Population: Perspectives and Issues. 2001;33(1):16-22.
14. Rahman MM, Hasan M, Akhter S, Sultan P. Adolescent pregnancy complication and wastage in Bangladesh. J Nepal Paediatr. 2010;30(3):147-53.
15. Bhalerao AR, Desai SV, Dastur NA, Daftary SN. Outcome of teenage pregnancy. J Postgrad Med.1990;36:136-9.
16. Mukhopadhyay P, Chaudhuri RN, Bhaskar P. Hospital based perinatal outcomes and complications in teenage pregnancy in India. J Health Populnutr. 2010;28(5):494-500.
17. Dubashi SS, Wani R. Teenage pregnancy. Bombay Hospital J. 2008;50(2):236-9.
18. Ambadekar NN, Khandait DW, Zodpey SP, Kasturwar NB, Vasudeo ND. Teenage pregnancy outcome: A record based study. Indian J Med Sci.1999;53:14-7.
19. Saxena P, Salhan S, Chatopadhyay B, Kohli MPS, Nandan D, Adhish SV. Obstetrics and perinatal outcome of teenage and older primigravidas – A retrospective analysis. Health and Population: Perspectives and Issues. 2001;33(1):16-22.