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Original Research Article

A Study on Teenage Pregnancy and its Outcome from a Tertairy Care Setup

Aswini Vuyyuri[1], Sarojini Devi V[2]

[1]Senior Resident, Department of Reproductive Medicine and Surgery, GSL Medical College, Rajahmundry.

[2]Former Professor & Head, Department of Obstetrics and Gynaecology, GSL Medical College, Rajahmundry.

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Corresponding Author: Dr. Aswini Vuyyuri

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Abstract

Introduction: Teenage pregnancy (TP) a burning problem in developed as well as developing countries. Studies reported that nearly 10% of girls become pregnant by 16 years. With these a study was conducted to find the incidence and contributing factors of TP and its outcome.

Methods: It was a prospective research. Pregnant women aged <19 years, both multi and primi gravida were included. Non cooperative women and pregnant women aged >19 years were not considered. The clinical as well as obstetric history were recorded. Onset of menarche, details of menstrual history and the date of last menstrual period were noted and expected date of delivery (EDD) was calculated by Naegele's rule. The EDD was conveyed, advised to attend the antenatal clinic regularly. Haemoglobin percentage, blood grouping, fasting blood sugar were estimated. Pelvic assessment was done at 38 week and admission was advised few days before the EDD, high risk members admitted two weeks before EDD. The post-natal follow up for general condition, evidence of infection and persistence of blood pressure in cases of hypertension were done. The particulars of the new born whether live or not, apgar score at one minute, maturity, weight, sex and any malformations if present were noted. Babies were admitted in NICU, if required. Perinatal mortality and maternal mortality were recorded.

Results: Total 670 TP were included, 18.5±0.6653 was mean age. Highest number were reported in 19 years (379; 56.6%). Nearly 19.9% (133) were illiterates and just 3.9% (26) completed college education. Majority (66.9%; 448) were belong to upper lower socioeconomic category. In this study just 0.9% (6) were unmarried and most of the study members were gravida 1 (419; 62.5%). Anaemia was the commonest (74.7%; 501) comorbid condition. The incidence of abortion was 4.3%, oligohydramnious was the commonest (2.2%; 15) complication.

Conclusion: TP is common in this area also. Anaemia is found to be the common clinical condition. Low socioeconomic status is the main contributory factor.

Keyword: Participant, Study, Pregnancy, Research.

Introduction

Teenage pregnancy (TP) is defined as pregnancy in a girl below 19. [1] TP is a burning problem in developed as well as developing countries. Highest TP is reported from Sub Saharan Africa (SSA) due to marriage at an early age. [2] This is 143 per 1000 in SSA and 2.9 per 1000 in South Korea. [3]

Latest Indian data suggest that TP is high with 62 pregnant teens out of every 1000 women which is 24 British teens get pregnant < 19th birthday and this is 42 in the US population. Studies reported that nearly 10% of girls become pregnant by 16 years, with the highest rates in SSA and South-Centraland South-Eastern Asia. An estimated 25% of India's population of 138 million is aged 15-25 years and girls aged 10-19 years compose about 22% of the female population. [4]

In developing countries, age and menarche are inversely correlated with socioeconomic status; significant differences exist between urban and rural populations, socioeconomic status. Various environmental, genetic and nutritional factors also influence this menarche. The timing of menarche in populations is probably affected by a variety of environmental, genetic, and socioeconomic factors, but most analysts consider nutritional status to be the dominant determinant. [5] With these a study was conducted to find the incidence and contributing factors of TP and its outcome.

Methods:

It was a prospective research conducted in the department of OBG, GSL Medical College. Study protocol was approved by the Institutional Ethics

committee. Study was carried from September 2022 to August 2023. Informed written consent was taken from the participants. Pregnant women aged <19 years, both multi and primi gravida were included in this research. Non cooperative women and pregnant women aged >19 years were not considered.

After recruiting the participants in the research, study protocol was explained. All the doubts were clarified with an assurance that the study outcome will not influence the health of either the participant or the new born. Then the clinical as well as obstetric history were recorded. Previous medical and surgical illness with reference to heart disease, hypertension, diabetes, pulmonary TB, epileptic disorders, bronchial asthma and previous surgical history were noted. Onset of menarche, details of menstrual history and the date of last menstrual period were noted and expected date of delivery (EDD) was calculated by Naegele's rule. [6] The EDD was conveyed, advised to attend the antenatal clinic regularly once a month upto 28 weeks of pregnancy, every fortnight there after upto 36 weeks and every week thereafter.

After the clinical examination height and weight of the participants was recorded. Haemoglobin percentage, blood grouping, fasting blood sugar were estimated. Complete urine examination was done and also VDRL. Iron folic acid supplementation was give as per the institutional protocol along with tetanus vaccination.

Pelvic assessment was done at 38 week and admission was advised few days before the EDD. Those at high risk were admitted a two weeks before the EDD. All were closely watched during labour for progress, duration and outcome. Clinical course of labour and operative interventions were noted. The post natal follow up for general condition, evidence of infection and persistence of blood pressure in cases of hypertension were done. The particulars of the new born whether live or not, apgar score at one minute, maturity, weight, sex and any malformations if present were noted. Babies were admitted in NICU, if required. Perinatal mortality and maternal mortality were recorded.

Results:

Out of the 1951 pregnant cases, 670 (34.4%) TP cases were included in this research. The mean age (MA) of the study members was 18.5±0.6653 years. Highest number of TPs were reported in 19 years (379; 56.6%) group (Table 1). Majority (67%; 448) were attained menarche at the age of 14 and the MA of menarche was 12.83±1.04years.

Table 1: Age and incidence of TP cases in this research.

Age	Frequency	Percent
14	2	0.3
15	2	0.3
16	4	0.6
17	19	2.8
18	264	39.4
19	379	56.6
Total	670	100.0

When the educational status was considered, 19.9% (133) were illiterates and just 3.9% (26) completed college education. Majority (66.9%; 448) of the study members belong to upper lower socioeconomic category and minimum (6; 0.9%) were in upper class (Table 2). In this study just 0.9% (6) were unmarried and most of the study members were gravida 1 (419; 62.5%).

Table 2: Socio economic status of the study participants

Socio Economic status	Frequency	Percent
Upper	6	0.9
Upper middle	53	7.9
Lower middle	102	15.2
Upper lower	448	66.9
Lower lower	61	9.1
Total	670	100.0

Anaemia was the commonest (74.7%; 501) comorbid condition. The incidence of abortion was 4.3%, oligohydramnious was the commonest (2.2%; 15) complication. The mean duration of labour was 12.99±4.63 hrs and 62.1% (416) underwent normal vaginal delivery (NVD) and there was 2.4% perinatal mortality. Among the live births, 101 (15.1%) required NICU admission.

Discussion

The incidence of TP was 34.4% (670) in this study. Similar findings were reported in the literature. [7] This was a prospective research, conducted for 16 months. The incidence of pregnancy in this study was 30.5%. Maternal death (MD) is one of the important aspects in the pregnancy. As per the

reports, the risk of MD and neonatal deaths is higher in low and middle income countries. [8] In India, every year, there were nearly 40000 MD due to pregnancy related complications. [9] In this research there were only 2 MDs were reported. In general there was a significant decline in the MD throughout the globe. Whereas the current research was conducted in a tertiary care health setup. Due to various UG and PG medical courses, man power is the main asset; hence individual care was taken. This could be the reason for the low MDs in the current research.

An appropriate volumes of the amniotic fluid is the most important aspects of healthy pregnancy. In oligohydramnious the volume of amniotic fluid is low, <500ml, common in LMICs. [10] In this research oligohydramnious was detected in 15 (2.2%) of the study members. Poverty, literacy and lack of job prospects are the reported risk factors of TP. [11] In this study also around 20% of the participants were illiterates. As per the WHO, during anaemia, there is reduction in the oxygen carrying function of RBC; this can be mild, moderate and severe. [12] In the study members also anaemia was the commonest (74.7%; 501) comorbid condition; 68.2% (457) had moderate anaemia, 5.8% (39) had severe anaemia. Due to anaemia among the study members, oral iron supplementation was continued three months after delivery.

The mean age (MA) of the study members was 18.5±0.6653 years. Highest number of TPs were reported in 19 years (379; 56.6%) group (Table 1). Majority (67%; 448) were attained menarche at the age of 14 and the MA of menarche was 12.83±1.04years. Richard briggs et al. reported that 20% of TP women were below 16 years and 80% were between 17-19 years of age. In this study, the incidence of TP was highest (509; 76%) in low socioeconomic group (Table 2). Nguyen PH et al. [13] also reported that TP is common among the low socioeconomic group. The incidence of abortion was 4.3% in this research. According to Nair et al. [14] report abortion is suitable as well as safe process when a girl becomes pregnant at an early age.

Conclusion

TP is common in this area also. Anaemia is found to be the common clinical condition. Low socioeconomic status is the main contributory factor.

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