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Maternal Morbidity and Mortality in a Women with Preeclampsia

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ABSTRACT: Background: Preclampsia is a hypertensive disorder of pregnancy which affects almost all organs in the body. The average incidence is 10%. It is one of the major cause for maternal morbidity and mortality.
Objective: To determine morbidity and mortality in a hospitalized pregnant women with preeclampsia.
Methods: This was retrospective study conducted in the Department of Obstetrics and Gynecology from January 2019 to December 2020. Study included women belonging to gestational age more than 20 weeks with preeclampsia. Women having associated medical disorders like diabetes, epilepsy, chronic hypertension, stroke, heart disease and also multiple pregnancy & polyhydramnios were excluded. Detail information collected from the records and analysed.
Results: Total number of deliveries during study period were 1401, out of which 97(6.92%) women had preeclampsia. Majority (63.19%) of women belonged to age group 17-25 years and most of them (51.54%) were primigravida. 67% of patients were unbooked and 51.54% belonged to very lower socio-economic status, 91(93.81%) were of late onset and 59(60.82%) were of severe type. In this study the common mode of delivery was LSCS (72.16%). Commonest complication was retinopathy, followed by HELLP syndrome, eclampsia. Other complications were DIC, abruption, postpartum hemorrhage. There was one maternal death(1.03%) during the study period.
Conclusions: From the study it is concluded that preeclampsia is still one of the major cause for maternal complications. Education and awareness among people belonging to lower socio-economic status and also timely & effective management can bring down the incidence of preeclampsia and its related complications.
Keywords: Preclampsia; Hypertensive Disorder; Pregnancy; Maternal; Morbidity; Mortality

I. INTRODUCTION:

Hypertensive disorders in pregnancy(HDP) are the spectrum of disorders ranging from already existing chronic hypertension to complex multisystem disorder like preeclampsia, HELLP syndrome, eclampsia, stroke and ventricular failure.[1] HDP are major cause for maternal and perinatal deaths. 19% of deaths are due to hypertension in pregnancy.[2]

Among HDP preeclampsia and eclampsia are major cause for maternal and perinatal complications.

Globally 76,000 women die each year from preeclampsia and 5,00,000 babies die each year from preeclampsia. Women belonging to low socio-economic countries are at higher risk of developing preeclampsia.[3]

According to National Eclampsia Registry (NER) FOGSI-IOG interim statistics-2013 the incidence of pre-eclampsia was found to be 10.3%.

Pre-eclampsia is disorder of pregnancy associated with new onset hypertension and proteinuria, which occurs most often after 20 weeks of gestation and frequently near term. It is a pregnancy specific syndrome that can affect virtually any organ system.[4]

The probability and recurrence of pre-eclampsia is approximately 15%. Women with pregnancy complicated with pre-eclampsia have a lifetime increased risk of coronary artery disease and stroke.[4]

II. MATERIALS AND METHODS:

This is a retrospective study conducted in the Department of Obstetrics and Gynecology from Jan 2019 to Dec 2020 in Navodaya Medical College Hospital and Research Centre, Raichur, Karnataka.

Inclusion criteria:
Women diagnosed with pre-eclampsia after 20 wks of gestation were included in the study. The study included hospitalized women.

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Exclusion criteria:

1) Women with pre-existing medical disorder like DM, heart disease, chronic HTN, renal and vascular disorder, epilepsy.
2) Multiple gestation, polyhydramnios

Pre-eclampsia – Defined as a multisystem inflammatory disorder beyond 20 wks of pregnancy with significant proteinuria characterized by new onset hypertension (BP≥140/90 mm Hg).

Non-severe – Blood pressure ≥ 140/90 mm Hg and < 160/110 mm Hg. No premonitory symptoms and normal HDP laboratory parameters.

Severe Pre-eclampsia – BP ≥ 160/110 mm Hg with/without pre-monitory symptoms with/without abnormal HDP lab parameters or BP≥140/90 mm Hg with premonitory symptoms and/or abnormal HDP lab parameters.

Premonitory symptoms – Headache, blurring of vision , vomiting, right upper quadriant pain, sudden excessive weight gain, sever oedema.

Abnormal HDP lab- Low platelets, elevated liver enzymes, elevated serum creatinine and abnormal coagulation profile.

Early oneset Pre-eclampsia – Onset of proteinuric hypertension is before 34 wks of pregnancy.

Late onset - Pre-eclampsia onset of proteinuric hypertension is after 34 wks of pregnancy.

Information regarding age, parity, socio-economic status, gestational age, premonitory symptoms, lab investigations, mode of delivery and maternal complications were collected from the records and analysed.

Socio-economic status was classified according to modified Kuppaswamy classification.

III. RESULTS:

During study period total number of deliveries were 1401, out of which 97(6.92%) had pre-eclampsia.

Table 1- Distribution of pre-eclampsia according to demographic characteristics.

Demographic characteristics	No. of cases	Percentage
Age		
17-25 yrs	62	63.19%
26-40 yrs	35	36.08%
Parity		
Gravida 1	50	51.54%
Gravida 2	29	29.89%
Gravida 3	13	13.4%
Gravida 4	05	5%
Booked	32	32.98%
Unbooked	65	67%

Common age of presentation was between 17-25 yrs(63.19%). Most patients with pre-eclampsia were primigravida (51.54%) and it was less common in multigravida. Out of 97 patients, 65(67%) cases were unbooked and 32(32.98%) were booked.(Table 1)

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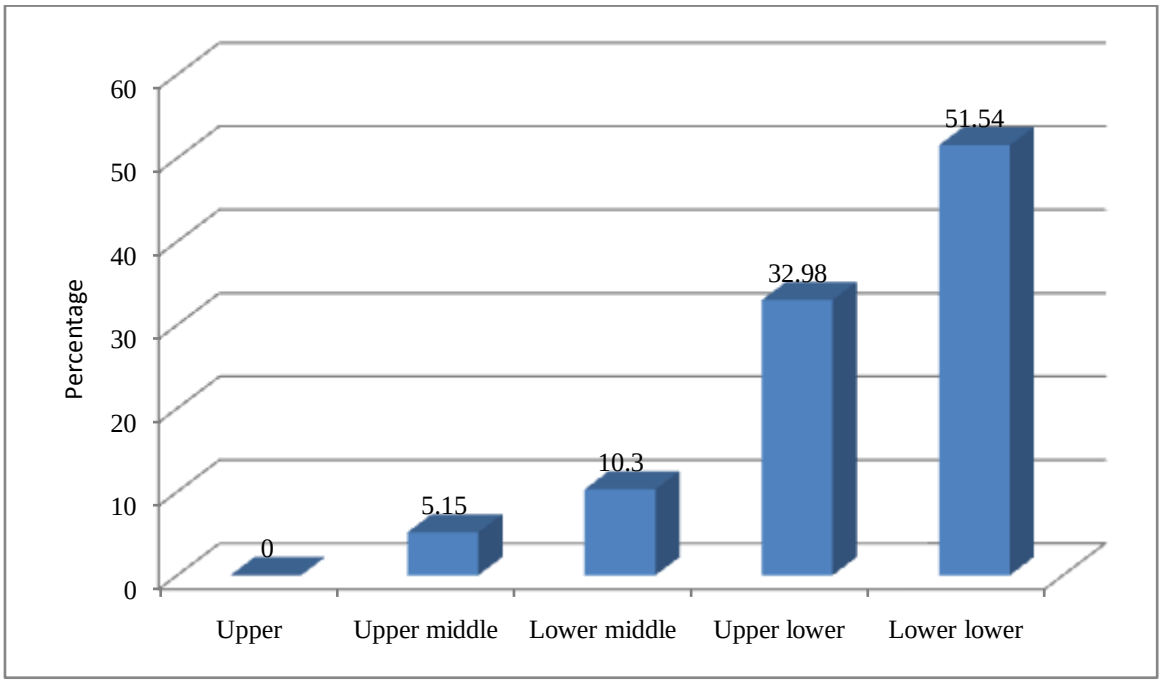

Graph 1: Distribution of pre-eclampsia according to socio-economic status

Majority of patients belonged to lower socio-economic status.(Graph 1)

Table 2: Distribution of pre-eclampsia according to onset and severity

Onset (Gestational age)	**No. of patients**	**Percentage**
Early < 34 wks	06	6.18%
Late ≥34 wks	91	93.81%
Severity		
Nonsevere	38	39.17%
Severe	59	60.82%

Most common type of pre-eclampsia was late onset and severe type. (Table 2)

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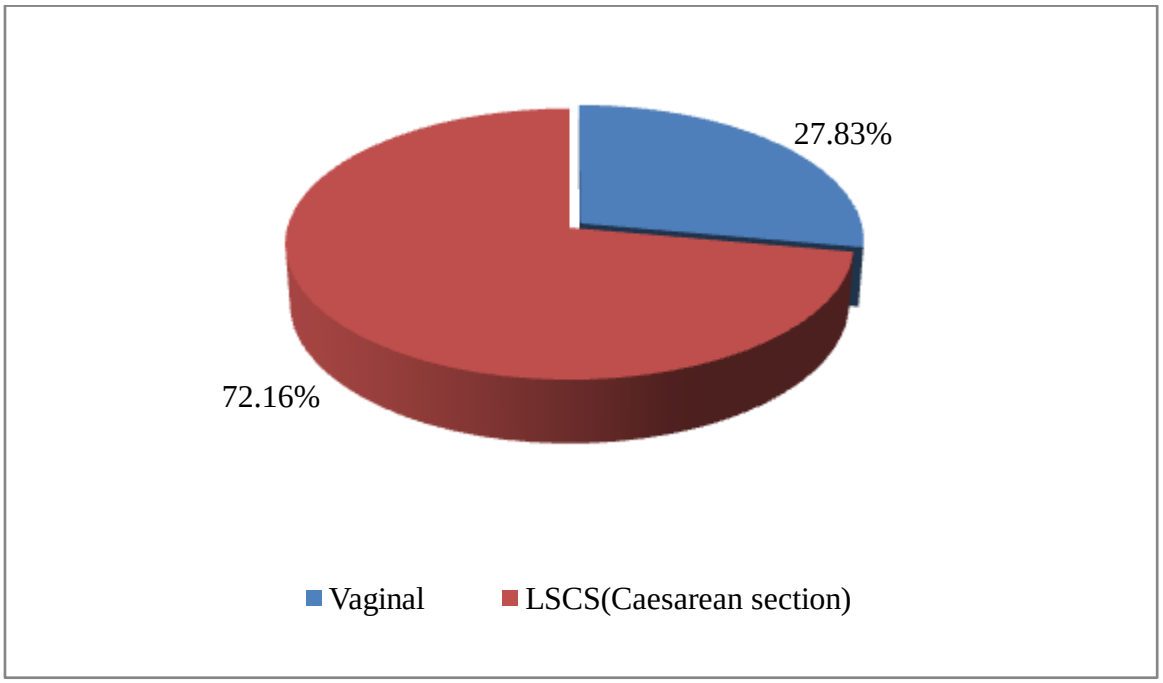
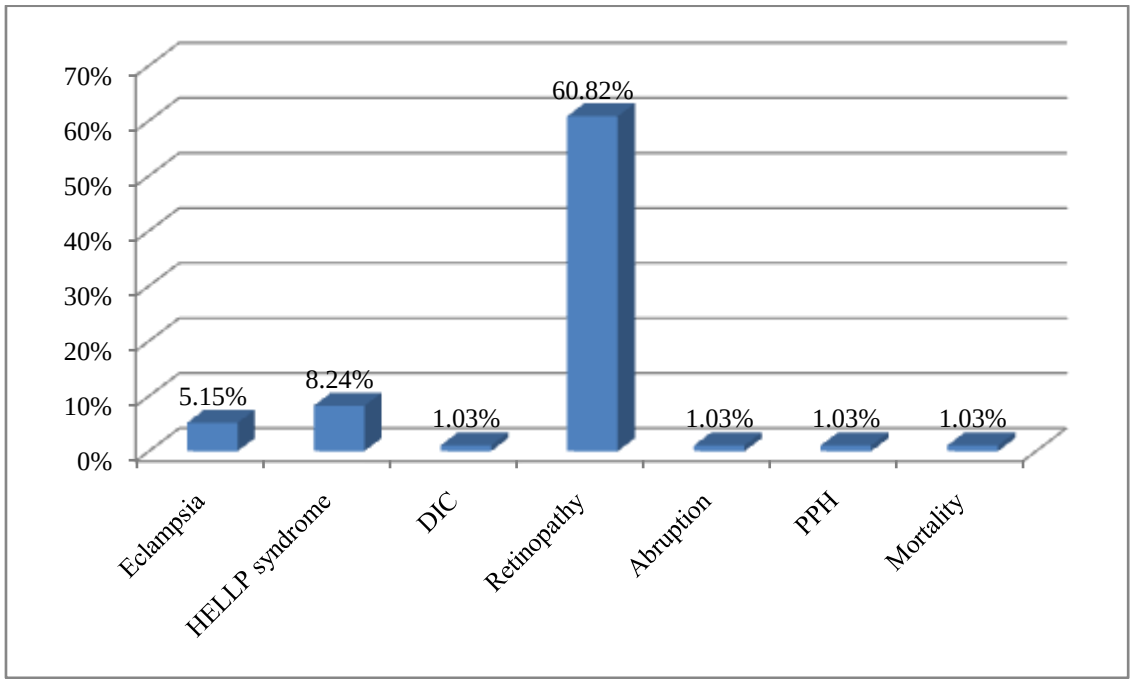


Graph 2: Distribution of pre-eclampsia according to mode of delivery

Most common mode of delivery was caesarean section (72.16%). (Graph 2)



Graph 3: Maternal complications(Morbidity and mortality)

Most common complications was retinopathy followed by HELLP syndrome and eclampsia. In this study there was one mortality due to HELLP syndrome followed by abruption and DIC.(Graph 3)

IV. DISCUSSION:

Pre-eclampsia is a pregnancy specific hypertensive disorder. It affects almost all organs of the body.

Study conducted by Parveen et al, showed that common age group presenting with pre-eclampsia was between 21-25 yrs(46.23%) and it was more

common in primigravida(61.2%) which was similar to the present study.

According to this study pre-eclampsia was more common in lower socio-economic status and in unbooked patients which correlates with most of the studies. This study shows majority of patients(93.81%) belonged to late onset type of pre-eclampsia and also 59(60.82%) were of severe type. This could be due to lack of awareness of the condition in people belonging to lower socio-economic status leading to reaching hospital late. In this study common mode of delivery was caesarean section(72.16%) commonly due to uncontrolled hypertension and fetal distress.

Maternal complications in this study could be probably due to again same reason as stated above,this could be due to lack of transport facilities and lack of education. Complications like abruption, eclampsia, HELLP syndrome and maternal death were also observed in study carried in Ethopia. There was one maternal death(1.03%) in this study which could be probably due to late reach to hospital with severe pre-eclampsia and fast deterioration leading to HELLP syndrome and DIC

V. CONCLUSION:

Pre-eclampsia still remains a major health problem in our country. It is one of the major cause for maternal morbidity and mortality. Incidence and complications of pre-eclampsia can be reduced by creating awareness specially among people belonging to lower socio-economic status and giving education to them regarding the condition. Morbidity and mortality due to pre-eclampsia can also be reduced by better antenatal care, identification of high risk cases, timely decision and treatment.

REFERENCES:

[1]. Hypertensive disorders in pregnancy (HDP) good clinical practice recommendation 2019. FOGSI-Gestosis-ICOG. www.fogsi.org.

[2]. Abalos E, Cuesta C, Carroli G, Qureshi Z, Widmer M, Vogel JP, Souza JP; WHO Multicountry Survey on Maternal and Newborn Health Research Network. Pre-eclampsia, eclampsia and adverse maternal and perinatal outcomes: a secondary analysis of the World Health Organization Multicountry Survey on Maternal and Newborn Health. BJOG. 2014 Mar;121 Suppl 1:14-24.

[3]. FIGO. A Pragmatic Guide for First-Trimester Screening and Prevention of pre-eclampsia. May 2019;145:1-33.www.figo.org/pre-eclampsia-guidelines.

[4]. Fernando Arias, Amarnath Bhide, Arulkumaran S, Kaizad Damania,Shirish Daftary wt al (2020). Arias' Practical Guide to High-Risk Pregnancy and Delivery (5th Edition). Elsevier. New Delhi,p-171-219.

[5]. Parveen M. Aabidha1, Anne G. Cherian, Emmanuel Paul, Jasmin Helan. Maternal and fetal outcome in pre-eclampsia in a secondary care hospital in South India. Journal of Family Medicine and Primary Care.2015 Apr-June;4(2):257-260.

[6]. Belay Tolu L, Yigezu E, Urgie T, Feyissa GT. Maternal and perinatal outcome of preeclampsia without severe feature among pregnant women managed at a tertiary referral hospital in urban Ethiopia. PLoS One. 2020 Apr 9;15(4):e0230638.

[7]. Sharma C, Gupta S, Tyagi M, Mani P, Dhingra J (2017) Maternal & Perinatal outcome in Hypertensive Disorders of Pregnancy in a Tertiary Care Hospital in Northern India. Obstet Gynecol Int J 6(6): 00229. DOI: 10.15406/ogij.2017.06.00229.

[8]. ACOG Practice Bulletin No. 202: Gestational Hypertension and Preeclampsia. Obstet Gynecol. 2019 Jan;133(1):e1-e25.

[9]. Sibai BM. Diagnosis and management of gestational hypertension and preeclampsia. Obstet Gynecol. 2003 Jul;102(1):181-92.

[10]. Khan KS, Wojdyla D, Say L, Gülmezoglu AM, Van Look PF. WHO analysis of causes of maternal death: a systematic review. Lancet. 2006 Apr 1;367(9516):1066-1074.

[11]. Sibai B, Dekker G, Kupferminc M. Pre-eclampsia. Lancet. 2005 Feb 26-Mar 4;365(9461):785-99.