



MEDICAL DISORDERS IN PREGNANCY AMONG INDOOR PATIENTS AT TERTIARY LEVEL HOSPITAL

Gynaecology

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ABSTRACT

Aim: Determine the spectrum of medical disorders in admitted pregnant women and its impact on maternal and fetal outcome.

Methods: Retrospective study of 200 cases of medical condition in pregnancy in department of obstetrics and gynecology of tertiary care hospital from october 2018 to october 2019.

Results: Most common medical disorder is pregnancy induced hypertension followed by anemia and hypothyroidism. Maximum maternal and fetal morbidity and mortality is with PIH.

Conclusion: Evaluation of all pregnant females at first visit and then regular follow up visits will detect pre existing or pregnancy associated medical disorders early and can decrease maternal and fetal mortality and morbidity associated with it.

KEYWORDS

INTRODUCTION

Pregnancy is a physiological state which can be complicated by many medical disorders which may be pre existing or new. These medical condition may complicate pregnancy or pregnancy itself can have adverse impact on these medical conditions. Outcome of pregnancy will depend on nature of disease, severity of disease process at onset of pregnancy, gestational age at onset of disease, and its proper and timely management. Many medical conditions may be co existing.

These disorders individually or in combination complicate pregnancy from maternal and fetal view point. An increased surveillance for maternal and fetal well being is mandatory when such complicating factors are present. Each individual disorder may require a different set of surveillance protocol for a favourable management. In some conditions, pregnancy is contraindicated while in others early termination may be warranted for the health of mother and fetus.

All pregnant females should have a regular antenatal check-ups and investigations so that various medical disorders can be detected early in time and can be managed effectively. With the advancement in all the sectors especially in maternal/fetal medicine, obstetric anesthesia and pediatrics, more fruitful outcome can be anticipated even in pregnancies with the medical disorders

Objectives:

- To study the spectrum of different medical disorders in pregnancy
- To study the maternal and foetal outcome in medical disorders

Method

Retrospective study of 200 cases conducted in department of obstetrics and gynecology of tertiary care hospital by reviewing medical records of patients with medical diseases admitted from october 2018 to October 2019. All data collected in proforma and analysed.

Inclusion criteria:

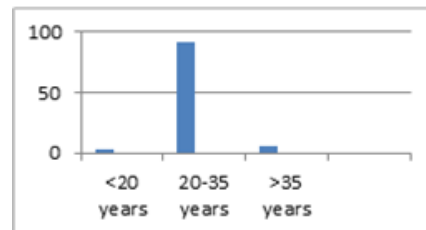
Patient with known case of medical disorder or diagnosed during pregnancy are included
All booked and unbooked cases included
All post partum patients with medical conditions are included

Exclusion criteria:

Medical disease leading to abortion in first trimester

OBSERVATION AND RESULTS

Medical diseases in pregnancy may be multifactorial. In this study, majority of patients are in age group 20-35 years (91%). This may be due to the optimal age of reproduction (20-35 years). 6% are seen in age group >35 years



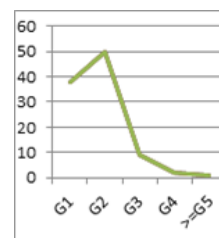
Medical disorders in different age groups

There are maximum chances of pre term delivery (48%) in pregnancy with these medical conditions. 47% of delivered patients were in gestational group of 37 to 40 weeks. 4% delivered before 28 weeks which included gestational diabetes mellitus (1 case) and pre eclampsia (3 cases).



Medical disorders and gestational age

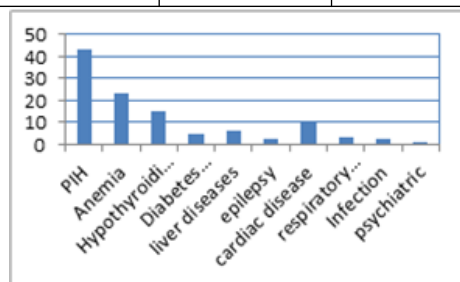
60% are multi gravida .38% were primi gravida and 2% were grand multi gravida.



Medical disorders and gravida status

Age in years	No of patients	Percentage
<19	6	3
20-35	182	91
>35	12	6
No. of pregnancy		
Primigravida	76	38

Multigravida	120	60
Grandmulti	4	2
Period of gestation(weeks)		
<28	8	4
28-36	98	48
37-40	94	47
>40	2	1



Medical disorder	number (200)	Percentage
Hypertensive disorder	87	43.5
Anemia	46	23
Hypothyroidism	30	15
Gestational Diabetes mellitus	10	5
Liver diseases	12	6
Cardiac diseases	20	10
epilepsy	5	2.5
Respiratory diseases	6	3
Infection	5	2.5
Psychiatric	1	0.5

Hypertensive disorder of pregnancy(43.5%),were the commonest of all medical disorders followed by anemia(23%),hypothyroidism (23%) , cardiac disease (10%) and then liver disease(6%).

Hypertensive disorder included PIH(30%),Pre eclampsia(64%) and eclampsia(6%).

Anemia consists of 23% among all medical conditions. 60% patients required blood transfusion and 40 % patients did not require transfusion. It included Iron deficiency anemia(88%),sickle cell anemia(5%) and others (7%).

Cases with Cardiac diseases included patients of RHD (81%),congenital heart disease (18%), and cardio myopathy (1%) .

Respiratory disorders were seen in 6 women among whom There were 2 cases of H1N1 pneumonia,1 case of Tuberculosis and 3 cases of asthma.

Infection included 3 cases of Typhoid and 2 cases of Dengue .

Type of medical disorder(200)	NICU admission	IUGR	Prematurity	Death within 7 days of NICU admission	IUD
Hypertensive disorder (87)	52(60%)	38(43.6%)	55(63.2%)	9(17.3%)	10(11.5%)
Anemia(46)	15(32.6%)	16(35%)	20(43.4%)	2(4.3%)	5(10.8%)
Hypothyroidism (30)	5(16.6%)		7(23%)		
Gestational Diabetes mellitus(10)	4(40%)		4(40%)	1(10%)	2(20%)
Liver disorders(12)	7(58%)		5(41.6%)	1(8.3%)	4(33.3%)
Epilepsy(5)	2(40%)		2(40%)		
Cardiac diseases(20)	6(30%)	2(10%)	3(15%)	2(10%)	
Respiratory diseases(6)	3(50%)	2(33.3%)	2(33.3%)		2(33.3%)
Infection(5)	2(40%)				

Foetal outcome in medical disorders in pregnancy

Maximum perinatal morbidity seen in hypertensive disorders with NICU admission(60%) and IUGR(43.6%). Maximum prematurity seen in PIH followed by anemia and liver diseases.

Type of medical disorder	Cesarean section	Normal Vaginal delivery	Operative vaginal delivery	ICU admission	Maternal mortality
Hypertensive disorder (87)	52(60%)	34(40.4%)	1(1.1%)	31(35.7%)	3(3.5%)
Anemia(46)	14(30%)	32(69%)	-	5(10.8%)	-
Hypothyroidism (30)	16(53%)	14(47%)			
Gestational Diabetes mellitus(10)	6(60%)	4(40%)		1(1%)	
Liver disorders(12)	3(25%)	9(75%)		3(25%)	1(8.3%)
Epilepsy(5)	1(20%)	4(80%)			
Cardiac diseases(20)	8(40%)	11(55%)	1(5%)	4(20%)	1(5%)
Respiratory diseases(6)	2(33.3%)	4(66.6)		1(16.6%)	2(33.3%)
Infection(5)		5(100%)		2(40%)	

Maternal outcome in different medical disorders in pregnancy

Maximum ICU admissions(35.7%) and mortality(3.5%) is seen in hypertensive disorder in pregnancy.Respiratory diseases were second most common cause of mortality which included 2 cases of H1N1 pneumonia followed by liver disease.There were high rates of cesarian delivery in hypertensive disorder and diabetes patients(60%).

DISCUSSION

Hypertension was found to be the most common medical condition in the women studied with its various manifestations.Hypertensive diseases continue to be a leading cause of maternal mortality and studies have shown increase in their incidence due a rising trend in obesity(1,2)

Hypertensive disorders, particularly eclampsia, have been stated to cause approximately 12% of all maternal deaths(2)

Preeclampsia leads to increased perinatal morbidity and mortality due to associated IUGR and fetal hypoxia. Any medical disorder in pregnancy presents a significant risk to foetal well-being, such as premature birth, small for date infant or still births and early neonatal death. Identification of patients at risk for these complicated pregnancies with poor outcome is fundamental to antenatal care. It is seen that these conditions are multi factorial and a female may suffer from more than one medical disorders resulting in high risk pregnancy and poor outcome of it.

In present study PIH is associated with 60 % NICU admission ,43.6% iugr,63.2% prematurity,17.3% early neonatal mortality and 11.5% IUD.

Similarly In another study by Shrivastava S et al, on Medical disorders in pregnancy and pregnancy outcome, Maximum perinatal morbidity was seen in females suffering with hypertensive disorders (53.4%), with 17 (41.8%) IUGR and 6 (11.6%) intra uterine demise respectively out of 43 cases(3)

Some of these medical diseases, especially hypertensive disorders, negatively impact fetal growth through utero placentar insufficiency, leading to intrauterine growth restriction. Also, the fact that many of these women give birth early due to medical or surgical intervention would account for lower fetal birth weights. Studies have shown the findings of poorer APGAR scores in neonates born to mothers with medical disorders when compared to healthy mothers(4,5)

In a similar study by Ghana et al in 2017,Hypertensive disorder in pregnancy are associated with significant perinatal morbidity and mortality. Major perinatal outcome include Intrauterine growth restriction(6.3%),preterm delivery(21.7%),low birth weight(24.7%)and birth asphyxia(15.2%). (6)

In present study,34% cases of PIH require ICU admissions and 3.4% was maternal mortality. In another study, Maternal deaths occurred in 2.8% of cases.(4)

The second most common medical disorder in pregnancy seen in developing country is anaemia. Among pregnant women, prevalence of 58%-89.6% has been documented in the country.(5)The risk of preterm delivery and low birth weight was 4 to 1.9 times higher among anemic women according to study by Lone FW et al.(7)In this study,43.4% of anemic females were associated with prematurity and 32.6% required NICU admission. Anemia predisposes women to intrauterine growth restrictions and to infection during pregnancy and childbirth, and increased risk of death due to obstetric hemorrhage.

In one study of Pregnancy complicated by cardiac disease: fetomaternal outcome by Ankita Singh, Sudha Prasad in 2018, Cesarean section was performed in 109 (21.4%) of 508 cases mainly for obstetric indication. Overall cardiac complication rate was 38.38%. Maternal mortality was seen in 6 out of 508 cases. Preterm labor was seen in 19.9 % cases and 19 % require NICU admission.(8)In present study,8 out of 20 cases required cesarean section mostly for obstetric reasons .There are 30 % NICU admissions and 15 % were born with prematurity. There is one maternal mortality. Cardiac disease complicates 2 % of pregnancies and contribute to one fifth of all maternal deaths.(9)The most frequent fetal complications are preterm birth and growth restriction. There were 2 cases of IUGR out of 20 deliveries.

In a study on Foetomaternal outcome in women with gestational diabetes mellitus by Fareed P et al, Prematurity was seen in 31% , Neonatal admission was seen with 53% babies, IUD was seen in 9 cases out of 100 cases. whereas in present study,40% were premature,40% require NICU admission and there were 2 cases of IUD out of 9 cases of pregnancy with diabetes mellitus. The main fetal risks are sudden fetal demise, macro somia, growth restriction and malformation.

LSCS rate was much high in GDM group (74%),44 % developed pre eclampsia in study by Fareed P et al whereas in present study 6 out of 9 patients (60%) require cesarean section. Thus, diabetes in pregnancy is associated with increased rate of cesarean section which are due to dysfunctional labour,macrosomia,prolonged labour apart from other indications.Pre eclampsia occurs in 10% of patients with Gestational diabetes mellitus. In this study 4 out of 10 patients with gestational diabetes had pre eclampsia.(10)

In epilepsy patients,Low birth weight babies were recorded in 24 (21.82%)infants . There was no significant increase in the risk of complications of pregnancy or delivery.(11)In this study,2 babies required NICU admission and 2 were premature out of 5 deliveries.

Pregnancy complicated with jaundice carries very poor maternal and fetal outcome. Poor outcome may be attributed to delay in seeking medical advice, lack of awareness, lack of proper antenatal checkups.Main reason for maternal mortality was hepatic encephalopathy in 64.6%. Mortality was higher in patients with total bilirubin > 10mg%. 27.4% were stillborn and 9.6% had early neonatal death(12)

In this study. there is 1 maternal mortality which was due to fulminant hepatic failure in Hepatitis E. Out of 12 patients,4 were IUD. 5 were associated with prematurity and 7 required NICU admission and early neonatal deaths was seen in 1 out of 7 NICU admissions.

Hepatitis E, usually a benign hepatitis infection in men and non pregnant women, acquires a grave form in pregnant women. The incidence of fulminant hepatic failure and mortality rate is much higher than that associated with other hepatic viral infections. (13)

CONCLUSION

Hypertensive disorders in pregnancy are the most common medical disorder followed by anemia and hypothyroidism. Liver diseases and cardiac diseases carry grave prognosis in pregnancy. Early diagnosis is required to decrease maternal and fetal mortality. Different medical disorders affect pregnancy outcome. Pregnancy management therefore, requires multi disciplinary intervention for better outcome.

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