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Original Research Article

Study of medical disorders in pregnancy among in patients at a tertiary care hospital in Haryana, India

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ABSTRACT

Background: Pregnancy is a physiological condition in which various changes occur in pregnant women just to accommodate growing fetus. Pregnancy is a stress test for woman and may unmask certain underlying chronic diseases like, DM, hypertension which were silent or asymptomatic prior to pregnancy. This study was done to know the incidence, type and demographic profile of medical disorders in pregnancy among in patient at a tertiary care hospital.

Methods: It was a retrospective study conducted on 578 patients of medical disorders in pregnancy admitted in a tertiary care hospital from January 2017 to December 2017. Data collected from record room and analysis done.

Results: Total antenatal admissions were 4721. Incidence of medical disorders was 12.24%. Majority of women were in age group 20-30 years (65.5%). Low-parity (P0, P1). Hypertensive disorders in pregnancy was commonest reported disorder (42.3%), followed by hematological disorder (38.7%), liver disorder 5%, endocrine disorder 4.8%, epilepsy 3.8% and HIV 2.6% in present study.

Conclusions: Hypertensive disorders were commonest medical disorder followed by hematological, liver, endocrine and epilepsy. All medical disorders in pregnancy to be managed by team approach.

Keywords: Anemia, Hypertension, Liver disorders, Medical disorder, Pregnancy

INTRODUCTION

Pregnancy is a physiological condition in which various changes occur in pregnant women just to accommodate the growing fetus. These changes occur in almost every organ and system like, genital, vascular, metabolic, respiratory, cardiac, hematological and cutaneous changes. Pregnancy is a physiological stress test that unmasks certain underlying chronic diseases like Diabetes mellitus, hypertension, chronic renal disease, cardiac disease and hypercoagulability state.¹ Some of these chronic diseases are silent or asymptomatic prior to pregnancy. Women with medical disorders should be counselled prior to conception regarding her disease, its effect on pregnancy and complications which may arise

during pregnancy. Some medical disorders have long term effects also like GDM have 75% likelihood of developing type II DM in subsequent five years and with Pre-eclampsia likely to develop CAD and stroke in later life.² Medical complications in pregnancy represent a significant challenge to the healthcare system.³ Aim of this study is to know the incidence, type and demographic profile of medical disorders in pregnancy among in patients at a tertiary care hospital.

METHODS

This was a retrospective study conducted in one unit of department of obstetrics and gynecology at a tertiary care hospital for a period of one year.

Study population- case sheets of 578 patients of medical disorders in pregnancy who were admitted in labor room and ward were collected from record room for a period of one year from January 2017 to December 2017 and studied for various parameters.

Inclusion criteria

- All cases of medical disorders in pregnancy from 28 weeks of gestation onwards were taken.

Exclusion criteria

- All pregnant women without any medical disorder were excluded from this study.

It was a retrospective study. Case sheets of 578 pregnant women with medical disorders were studied for various parameters like age, residence, parity, period of gestation at the time of presentation and type/subtype of medical disorders in pregnancy in detail.

Statistical analysis

For all parameters, data collected were tabulated, frequency and percentage were analyzed by using MS excel.

RESULTS

A total of 578 patients of medical disorder with pregnancy were studied in the study period during January 2017 to December 2017. Total antenatal admissions in this period were 4721. Incidence of medical disorder in pregnancy was 12.24%. Majority of women were in age group 20-30 years (65.5%) Table 1.

Table 1: Demographic profile of patients.

Residence	Number	Percentage
Rural	306	52.9
Urban	272	47.1
Age		
Up to 19 years	108	18.6
20-30 years	379	65.5
More than 30 years	91	15.7

Mean age: 25.08±2

Table 2: Parity distribution.

Parity	Number	Percentage
P0	198	34.2
P1	166	28.7
P2	139	24.1
≥P3	75	12.9

Mean age was 25.08±2. Youngest patient was 17 year and oldest was 40 years old. 63% women were either conceived for the first time or para one Table 2. More

than half (50.17%) women presented at 37 weeks of gestation or above, Table 3.

Table 3: Distribution according to gestational age.

Period of gestation	Number	Percentage
28-32 weeks	102	17.6
33-36 weeks	186	32.17
≥37 weeks	290	50.17

Table 4: Type of medical disorders in pregnancy.

Type of medical disorder	Number		
Hematological disorder 224 (38.75%)	Anemia (nutritional)	217	
	Thalassemia-intermedia	1	
	Thrombocytopenia	6	
Hypertensive disorders 245 (42.38%)	PIH	216	
	Chronic hypertension	9	
	Eclampsia	20	
Endocrine disorders 28 (4.8%)	DM	10	
	Hypothyroidism	17	
	hyperthyroidism	1	
Liver disorders 29 (5%)	cholestatitis	8	
	Hepatitis (21)	B	10
		C	10
		E	1
Viral diseases in pregnancy 16 (2.7%)	Chicken pox	1	
	HIV	15	
Respiratory diseases 6 (1.03%)	Bronchial asthma	4	
	Tuberculosis	2	
Neurological disorder 22 (3.8%)	Epilepsy	22	
Heart diseases		3	
Renal diseases		1	
Tropical diseases 4 (0.69%)	Malaria	1	
	Dengue	3	

Table 5: Sub-types of hypertensive disorders.

Sub-type	Number	Percentage
PIH	216	88.16
Eclampsia	20	8.16
Chronic hypertension	9	3.67
Total	245	100

Hypertensive disorders in pregnancy were most common disorder in our study (42.3%) including PIH, eclampsia and chronic hypertension followed by anemia, Table 4, and 5.

Hematological disorders other than anemia (nutritional) were thrombocytopenia and 1 patient with thalassemia intermedia, Table 6.

Table 6: Hematological disorders.

Type	Number	Percentage	
Anemia	Nutritional anemia	217	96.8
	Thalassemia intermedia	1	0.4
Thrombocytopenia	6	2.6	
Total	224	100	

Liver disorders in pregnancy constituted 5% including cholestasis and hepatitis, Table 7.

Table 7: Liver disorders in pregnancy.

Type	Number	Percentage	
Cholestasis	8	27.6	
Hepatitis (21, 72.4%)	B	10	34.4
	C	10	34.4
	E	1	3.4

DISCUSSION

Incidence of medical disorders in pregnancy in present study was 12.24% which is comparable to the study done by Agwu UM et al (16%) whereas in another study done by Baral G et al, incidence of medical disorder was 2.4%.^{4,5}

Our centre being the largest referral centre in Haryana, all high risk pregnancies are referred from different parts of Haryana.

In present study, majority of patients were in age group 20 to 30 years (65.5%) mean age being 25.08±2 and rural background (52.9%) more than urban 47.1% which is almost similar to the study done by Shrivastava et al which showed 65% rural versus 35% urban population and maximum patients were in age group 20-35 (91%).⁶ Early marriage and completion of family at early age in rural areas is the reason behind this result.

Hypertensive disorders in pregnancy were the most common medical disorders in present study (42.3%) including PIH (88.16%), chronic hypertension (3.68%) and eclampsia (8.16%) while study by Ye C et al showed 5.22% incidence including severe PIH (39.6%), chronic hypertension (3.68%) and eclampsia (0.89%) in their studies.⁷ They analyzed prevalence and risk factors of hypertensive disorders in pregnancy and there were 6 subtypes of hypertensive disorders in their study.

In present study hematological disorders in pregnancy were 38.75% which included nutritional anemia (96.8%), thrombocytopenia 2.6% and one patient with thalassemia intermedia (0.44%) while study done by Bora et al 8 showed 89.6% women had anemia and severe anemia (Hb<7gm) were seen in 8.3% of patients in there. In present study 5% patients had liver disorders with

pregnancy. Among them cholestasis of pregnancy was 27.6% and hepatitis was 72.4%. (hepatitis B, C and E, 34.8%, 34.8% and 3.4% respectively) while the study of Dang et al showed incidence of liver disorder 1.32% including cholestasis of pregnancy 79% followed by hepatitis B, C and E.⁹ (0.28%, 0.01% and 0.05% respectively).

Pregnancy with epilepsy incidence was 3.8% in present study in comparison to the study done by Raji C et al, which showed 0.6%.¹⁰ Incidence of epilepsy in pregnant women in their study.

Endocrine disorders in pregnancy were present in 4.8% patients. Maximum cases were of hypothyroidism 2.9% followed by diabetes 1.7% and hyperthyroidism 0.17% whereas in a study done by Devi RS et al, incidence of thyroid disorders were 11.6%.¹¹

Other medical disorders in pregnancy were HIV (2.6%), chicken pox, renal diseases and malaria 0.17% each, bronchial asthma 0.69%, tuberculosis 0.34%, and cardiac diseases in pregnancy 0.51%.

By seeing pattern of medical disorders in present study, it is clear that almost all type of medical disorders were reported in different proportions. Management of medical disorders in pregnancy is a team management which requires multispecialty team, intensive care setup and team approach for better outcome in these patients.

CONCLUSION

Hypertensive disorders in pregnancy were most common followed by anemia and liver diseases. Medical disorders in pregnancy constitutes a high risk pregnancy and to be managed by team approach and intensive care setup.

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

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