MATERNAL CRITICAL ILLNESS WITH SPECIAL REFERENCE TO SEPSIS – A COMPARISON

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Introduction

Critical illness in a pregnant lady may occur due to pre-existing medical diseases, from diseases that are concomitant to pregnancy, or conditions that are peculiar to pregnancy. Sepsis is a leading cause of critical illness with high maternal morbidity and mortality in India and worldwide as well. This study was performed to analyze critical diseases in pregnant, postpartum and postabortal women with particular focus on maternal sepsis in a tertiary care hospital in North India.

Objectives

- ✔ To find out prevalence of maternal sepsis in a tertiary care Institute in North India.
- ✔ To compare feto-maternal outcomes in maternal sepsis vs critical illness other than sepsis in pregnant, postpartum and postabortal females.

Methodology

A prospective cross-sectional study was done to analyse all critically ill pregnant women and women within 42 days of delivery or abortion for a study period of one year. Based on the causes of critical illness, Group S (those having sepsis/septic shock) and Group O (those who had critical illnesses excluding sepsis) were defined. Demographic, clinical, microbiological and feto-maternal outcome were recorded and analysed after comparing the parameters between Group S and Group O.

CRITERIA OF SEPSIS

- TWO of the following on atleast 2 occasions, at an interval of 4 hours:
  - ✔ temperature >38°C or <36°C,
  - ✔ Heart rate ≥100 beats/min,
  - ✔ respiratory rate ≥20/min,
  - ✔ WBC =>17x10^9/l or =<4x10^9/l.
  - ✔ $PaCO_2$ <32 mmHg

OR

- Purulent discharge from wound/drain
- Positive blood culture

Results

	Total cases (n= 181)	Group S (n=55) N(%)	Group O (n=126) N(%)	P value
Timing of critical illness				
Antepartum	120	16(27.3%)	104(86.8%)	< 0.00001
Postpartum	50	29(52.6%)	21(16.7%)	< 0.00001
Postabortal	11	10(18.1%)	01(0.8%)	< 0.00001
Pregnancy outcome				
Preterm deliveries	87	21(38.2%)	66(52.4%)	0.078
Term deliveries	60	19(34.5%)	41(32.5%)	0.792
Abortion	19	14(25.5%)	05(4%)	0.00001
Ectopic pregnancy	15	01(1.8%)	14(12%)	0.037
Mode of delivery				
CS delivery	84	22(40%)	62(49.2%)	0.253
Instrumental delivery	16	05(9%)	11(8.7%)	0.937
Vaginal delivery	47	13(23.6%)	34(27%)	0.636
Maternal Complications				
Surgical intervention	18	06(21.8%)	12(4.8%)	0.774
HDU admission	125	11(36.4%)	114(28.6%)	< 0.00001
ICU admission	56	22(41.8%)	34(9.5%)	0.081
Maternal death	26	16(29%)	10(8%)	0.00019
Foetal/neonatal outcome				
Live, Preterm birth	67	22(40%)	56(44.4%)	0.578
Live, term	54	19(34.5%)	35(27.8%)	0.360
NICU admission	68	18(32.7%)	50(40%)	0.374
Perinatal deaths	26	07(12.7%)	19(15.1%)	0.678

Out of 181 critically ill patients, 55(30.4%) were due to sepsis and 126 (69.6%)were due to other causes of critical illness(Eclampsia, APH, liver disorders, renal disorders, etc). The prevalence of maternal sepsis was 8.4/1000 live births. Out of 181 cases, 75% of the cases were unbooked, 66.3% patients presented antenatally while 27.6% presented in postpartum period and 6.1% were postabortal. The number of maternal deaths attributable to maternal critical illness were 26 which included 61.5% due to sepsis and 38.5% due to other causes of critical illness. In terms of foetal outcome, preterm births were less common in Group S (40%) as compared to Group O (44.4%). NICU admission were also lesser in Group S (32.7%) as compared to Group O (40%). Group S had less number of perinatal deaths (7/55, 12.7%) as compared to Group O (19/126, 15.1%).

Conclusion

Critical diseases can make any pregnancy difficult to manage. Monitoring of early warning scores can tell in advance about the clinical deterioration. Maternal sepsis remains a dangerous cause of both maternal and fetal morbidity and mortality. Early recognition and prompt management of maternal sepsis by a multidisciplinary team drastically improved the maternal and neonatal outcomes

References

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