

OBSTETRIC HYSTERECTOMIES – THE LAST SAVIOR IN OBSTETRICS – A RETROSPECTIVE ANALYSIS

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Abstract

Study is a retrospective analysis of 43 cases of emergency obstetric hysterectomies done in a tertiary care center in Chennai over the past 8 years. It involves an analysis of the overall incidence, various maternal and obstetric factors, associated risk factors, indications, intraoperative complications, associated UAE, postoperative complications, perinatal outcome, duration of stay, mortality. This study insists on the need of extensive critical evaluation and analysis of each and every patient before taking the decision of doing an emergency obstetric hysterectomy, management of all possible intraoperative complications, understanding of post operative sequelae and further on management of the same.

It is a retrospective analysis, for 43 unique cases that have occurred over past 8 years in a tertiary care center in Chennai. Each of the case have various inciting factors, some have rare complications which have been managed efficiently.

Keywords: Obstetric hysterectomy, Placenta accreta, Placenta previa, antepartum hemorrhage, Uterine artery embolisation, bladder injury, ureteric injury, blood transfusion.

INTRODUCTION

Emergency obstetric hysterectomy (EOH) is defined as extirpation of the uterus either at the time of cesarean section or following vaginal delivery, or within the puerperium period. It

is usually performed in the face of unrelenting and life- threatening obstetric hemorrhage. [1,2] It is important and necessary to study such events since they provide an insight into the standard of care provided and help to reduce maternal morbidity and mortality.

Conservative methods interventional radiology have all been advocated to effectively manage obstetric hemorrhage in low resource settings. However

, the leading cause of maternal mortality in India [47%] and the world over [34%] tends to be Obstetric hemorrhage. Hence EOH is seen as the ultimatum of a procedure that could possibly prevent maternal mortality provided it's performed at the correct instance. [3,4]

METHODOLOGY

This is a retrospective analysis of 43 cases of emergency obstetric hysterectomies performed in a tertiary care center – Sri Ramachandra medical college and hospital at Chennai over the past 8 years from 2016 to 2023.

It involves an extensive outlook on various parameters of the cases involved including the overall incidence.

OVERALL INCIDENCE – 0.1%

INCIDENCE AMONG LSCS – 0.21%

INCIDENCE AMONG NVD – 0.18%

PARAMETERS

Overall incidence

Maternal factors – Age, parity, socioeconomic status, admission status.

Obstetric factors – Gestational age at delivery, singleton / multiple gestation, mode of delivery.

Associated risk factors.

Indications –

Placenta accreta spectrum

Post partum hemorrhage

Rupture uterus

Placenta previa Abruptio

Hemoperitoneum

Broad ligament hematoma

Intraoperative complications, associated UAE, blood loss and postoperative complications.

Perinatal outcome, Duration of stay and Mortality.

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CASES DETAILS

Maternal age

AGE [YEARS]	
<= 25	4 - 9%
26-30	16 - 37%
31-35	18 - 42%
>35	5- 12%

Parity

PARITY	
PRIMIGRAVIDA	10 - 23%
MULTIGRAVIDA	33 - 77%

Admission status

ADMISSION STATUS	
OUTSIDE BOOKED/ REFERRED	10 - 23%
BOOKED AT SRMC	33 – 77%

Socioeconomic status

SOCIOECONOMIC STATUS	
UPPER / UPPER MIDDLE / UPPER LOWER	21 - 49%
LOWER MIDDLE / LOWER	22 - 51%

Obstetric factors / associated risk factors

GESTATIONAL AGE	
<28 WEEKS	2 - 5%
28-32 WEEKS	6 - 14%
32-37 WEEKS	18 - 42%
>37 WEEKS	17 - 39%

NUMBER OF FETUSES	
SINGLETON	39 - 91%
MULTIPLE	4 - 9%

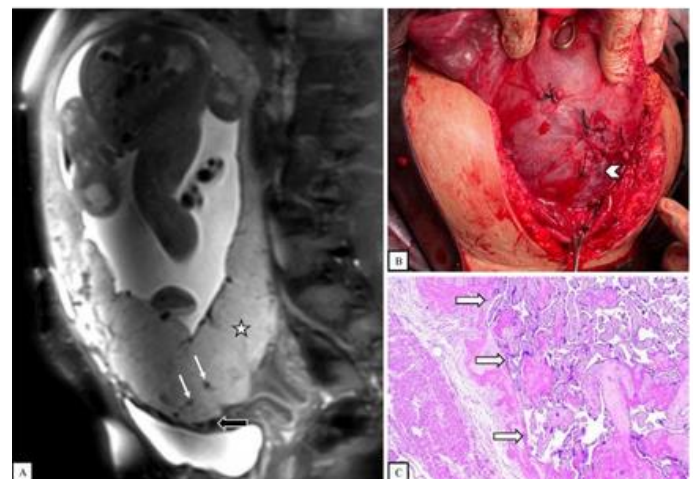
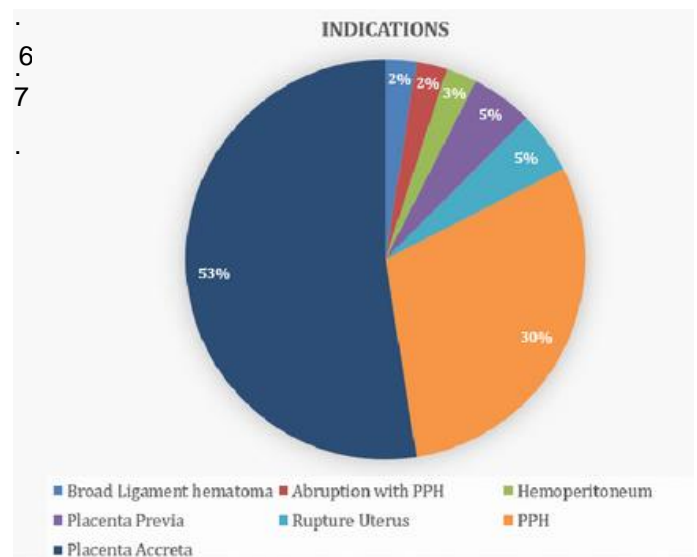
MODE OF DELIVERY	
NORMAL VAGINAL DELIVERY	9 - 21%
LSCS	34 - 79%

ASSOCIATED RISK FACTORS

Anemia – 11 cases.
IUD – 2 cases.
Gestational hypertension – 2 cases, Severe preeclampsia – 2 cases, HELLP syndrome – 1 case.
ITP – 1 case.
Gestational diabetes mellitus – 11 cases.
Rh negative pregnancy – 5 cases.

INDICATIONS FOR EMERGENCY OBSTETRIC HYSTERECTOMIES

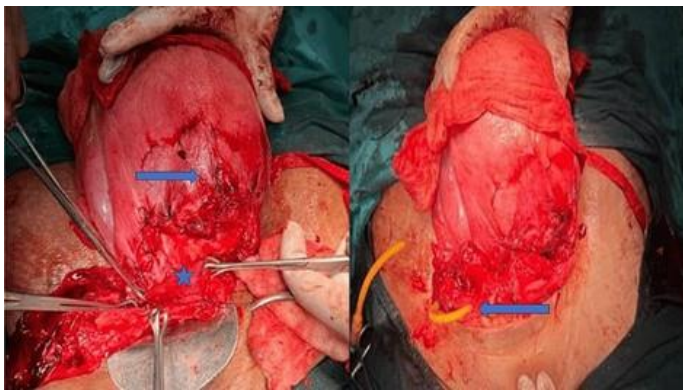
1. Placenta accreta spectrum – 52.5% [23 cases]
 - Post LSCS – 22 cases – all of which had associated placenta previa.
 - Post retained placenta – 1 case.
 - History of dilatation and curettage – 9 cases.
 - With Increta / Percreta – 3 cases.
2. PPH – 30% [13 cases] – 11 - primary PPH, 2 - secondary
 - Bakri balloon insertion attempted – 6 cases.
 - Compression sutures applied – 5 cases.
3. Rupture uterus - 5 % [2 cases].
4. Placenta previa with antepartum hemorrhage – 5 % [2 cases].
5. Hemoperitoneum - 2.5% [1 case].
6. Abruptio with PPH – 2.5% [1 case].
7. Broad ligament hematoma - 2.5% [1 case].



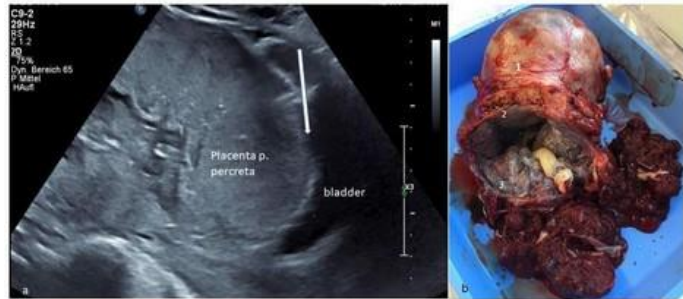
Placenta accreta spectrum



UV fold hematoma



Hematoma evacuation



Abruption

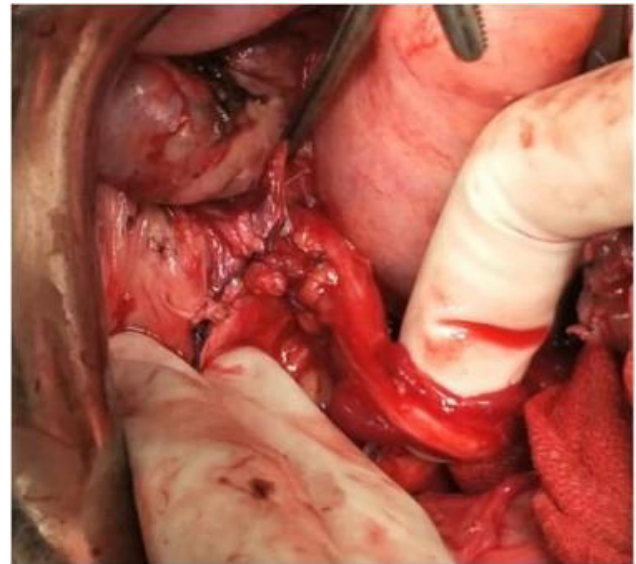
INTRAOPERATIVE COMPLICATIONS

INTRAOPERATIVE COMPLICATIONS	
Bladder injury with primary repair – 8 cases. Rent sizes ranging from 1-4 cm.	Ventilatory support with ICU care – 16 cases.
DJ Stenting – 4 cases.	Aortic compression.
Bladder / Bowel adhesiolysis – 4 cases.	CPR for cardiac arrest intraoperatively.
Ureteric injury – 3 cases.	
Hematoma – 3 cases. Broad ligament , pelvic and Bladder space hematomas.	
Vesicovaginal fistula. Ureteric reimplantation	

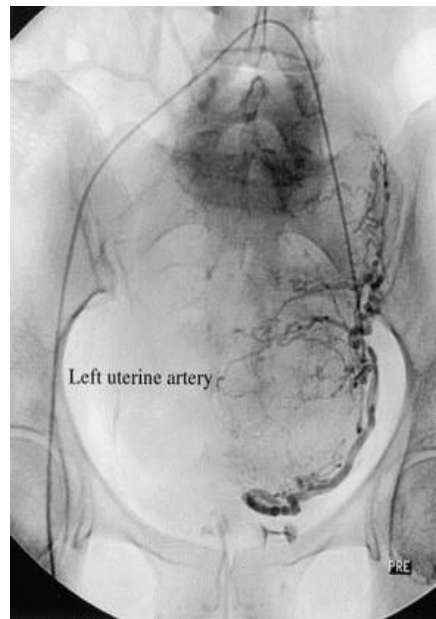
UTERINE ARTERY EMBOLISATION [17 CASES]

For PAS - 15 cases.

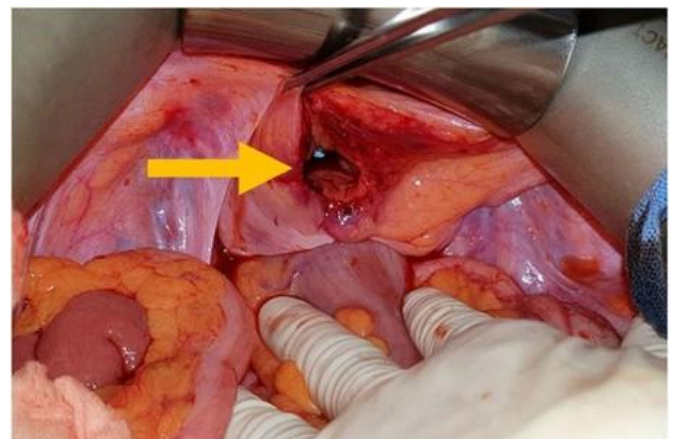
For PPH - 2 cases.



Ureteric injury



Uterine artery embolization



Bladder rent

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POST OPERATIVE COMPLICATIONS AND INTRAOPERATIVE BLOOD LOSS

POSTOPERATIVE COMPLICATIONS	
Ventilatory support with ICU care – 16 cases.	Psychosis – 2 cases.
Shock – 9 cases.	Metabolic acidosis.
Disseminated intravascular coagulation – 8 cases.	TRALI – Transfusion related acute lung injury.
Dyselectrolytemia – 5 cases.	Respiratory sepsis.
Acute renal failure – 3 cases.	
Septicemia – 3 cases.	
Ischemic hepatitis , pancreatitis – 2 cases.	

BLOOD LOSS

<1000 ml	5 - 12%
1000-2000 ml	15 - 35%
2000 – 3000 ml	12 - 28%
> 3000 ml	11 - 25%

MASSIVE BLOOD TRANSFUSION – PERFORMED FOR 9 CASES

Perinatal outcome, duration of hospital stay and mortality

PERINATAL OUTCOME
LIVE – 43.
• Mother's side – 23.
NICU – 20.
IUD – 2.
Mortality – 1 – one of a 30 weeks DCDA twins, 1 – 29 weeks singleton gestation.

DURATION OF HOSPITAL STAY	
<= 7 DAYS	63%
> 7 DAYS	37%

MORTALITY
2 cases that were referred from outside –both with EOH done outside for PPH , referred here for ICU care – these are not included in the analysis.
No mortality was noted from these 43 cases operated here at SRMC.

In our study, the overall incidence among LSCS patients was found to be higher than NVD patients. Majority of them were in the age group of 31-35 years, majority were multigravidas,

mostly booked at same tertiary care center, 28 of the 33 multigravidas had previous LSCS. 32-37 weeks' was the most common gestational age at delivery, 34 of the 43 patients were delivered by LSCS following which EOH was performed for various reasons. The most common indication was PAS – placenta accreta spectrum – in 23 of the 43 cases, followed by PPH in 13 cases. Rare indications were – broad ligament hematoma and rupture uterus. [5] The most common associated risk factor was anemia, the most common complication was bladder rent, rare complications being broad ligament hematoma, ureteric fistulas and vesicovaginal fistula. The most common complication was post operative shock followed by DIC. A rare complication seen was transfusion associated lung injury – TRALI. Associated uterine artery embolization was done for 17 cases. The average blood loss was seen to be 1000- 2000ml. Fortunately owing to rampant and efficient treatment, no mortality was observed in the 43 cases. [8]

CONCLUSION

- In spite of medical advancements and upscaled modalities , Obstetric hysterectomies still resort to be unpreventable and a highly valued life saving intervention at a critical time of decision making considering the patient's condition and outcome prior to proceeding with it. [6] The golden hour
- between conditional deterioration and decision making remains to be of prime importance in influencing further onward complications and overall patient outcome.
- Considering our study where PAS and PPH turn out to be the major indications, triaging of patients who are at high risk for PPH, prompt intrapartum management and immediate postpartum attentiveness can help immensely in forbidding any adverse events. Meanwhile shrewd Ultrasound guided imaging helps in picking up cases of PAS and rings an alarm bell of all sorts to be technically prepared for all the intraoperative complications that could possibly come forth. [7] Hence with a multidisciplinary care, a well equipped team and a clear cut plan of action, both prevention of such Obstetric hysterectomies and further prompt management if occurred is positively feasible and goes a long way in improving maternal care and reducing the maternal mortality. [9,10]

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