



AN ANALYSIS OF RELAPAROTOMIES FOLLOWING OBSTETRIC AND GYNAECOLOGICAL SURGERIES IN A TERTIARY HOSPITAL IN TAMILNADU

Gynaecology

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ABSTRACT

Aim: To analyse the relaparotomies performed in a tertiary care hospital following obstetric and gynaec surgeries done over a period of 12 months.

Method: Retrospective study.

Materials: Data collected from the records.

Place of study: Govt.Mohan Kumaramangalam Medical College Hospital, Tamilnadu.

Study period: June 2015 to May 2016.

Results: Total relaparotomies were 23. 83% were following caesarean section. 17% were following gynaec surgeries. Most common indication was haemoperitoneum. Coagulopathy was associated with 43% of cases. Average duration of time between primary surgery and reoperation was 18.5 hrs. Total deaths were 6(26%) and all were obstetric cases. The most common cause of death was coagulopathy with multi organ failure.

Conclusion: Relaparotomy is life saving in most occasions and has high morbidity and mortality. Relaparotomies can be prevented to some extent by adopting simple but important techniques during the surgical procedure and intense monitoring during the immediate post operative period.

KEYWORDS:

relaparotomies, caesarean section, haemoperitoneum

INTRODUCTION:

Emergency relaparotomy is an essential procedure performed to tackle the complications that occur following the primary surgery in certain situations. Relaparotomies carry high risk of mortality and morbidity in spite of the best available patient care. Even though it may be a life saving procedure it is very difficult to decide on a second surgery, especially when an option of conservative line of management is available. In the department of OBGYN, most of the relaparotomies follow emergency caesarean sections when compared to gynaec surgeries.

The incidence of relaparotomy varies between 0.2% to 1.1% following caesarean sections. The common indications for relaparotomies are internal bleeding, post partum haemorrhage, evisceration and intestinal obstruction.

AIM:

To study the indications, associated risk factors and outcome of relaparotomies performed in our institution during a period of 12 months from June 2015 to May 2016.

MATERIALS AND METHOD:

Our study is a retrospective study based on the data obtained from the records maintained in the department of OBGYN, Govt.Mohan Kumaramangalam Medical College Hospital, Salem, Tamilnadu, India. Data were collected pertaining to the relaparotomies performed during the period of one year from June 2015 to May 2016, and the analysis was made. The reoperations made within first 30 days after the first surgery were taken for study.

RESULTS:

23 patients underwent relaparotomy during the study period. 19(83%) were following caesarean section. 3(13%) were following gynaec surgeries. 1(4%) was following MTP with tubectomy. Rerelaparotomy or a second relaparotomy was performed in 2 obstetric cases. In 57% cases the primary surgery was done elsewhere. 43% cases were institutional primary surgeries. Most common indication was haemoperitoneum (48%). Next common indication was atonic PPH (22%). One case was opened up for retrieval of left out mop pad. Other cases were for intestinal obstruction, secondary PPH, broad ligament haematoma and burst abdomen. The primary surgery was most commonly an emergency procedure (78%). Most common indication of the primary surgery was previous caesarean section. The gynaec cases were abdominal hysterectomy done for fibroid uterus and LAVH done for dysfunctional uterine bleeding. Coagulopathy was associated with 43% of cases. Total deaths were 6(26%). Those cases ended up in death had shorter duration of hospital stay ranging from 9

hours to 6 days. Average duration of hospital stay excluding death cases was 13 days.

DISCUSSION:

Relaparotomies though are life saving procedures in most of the cases, it is not without complications. The risk of anaesthesia and the intra operative complications like injury to the bowel bladder, ureter and blood vessels, post op sepsis, are always there. The risk depends on the indications for relaparotomy and the procedure done during the second surgery. The outcome is related to the condition of the patient at the time of relaparotomy.

Table 2

S.no	Procedure done in primary surgery	No. of cases
1	Emergency LSCS	15
2	Emergency LSCS followed by subtotal hysterectomy	3
3	Elective LSCS followed by subtotal hysterectomy	1
4	Abdominal hysterectomy	2
5	LAVH	1
6	MTP with TAT	1

The incidence of relaparotomies vary between institutions depending upon the case load, the type of cases handled, facilities available etc. Totally 8896 surgeries were performed during the study period. The incidence of relaparotomies in our institution during the study period was 0.2%. Considering only the caesarean deliveries performed in our institution, the incidence of relaparotomies among institutional cases is 0.1%. This is similar to that in Indian studies 1.2.3.4.. The incidence reported is 0.1% by Swapnadas from West Bengal, 1.4% by Naveen Reddy from Telangana, 0.09% by Shuguftha Yaseen Rather from Kashmir, 0.08% by Naseema Beevi Ahmed Khan from Kerala.

Table 1

s.no	Title	No. of cases
1	Total no. of relaparotomies	23
	a) obstetric	19 (83%)
	b) gynaec	3 (13%)
	c) Family planning	1 (4%)
2	Place of primary surgery	
	a) institutional	10 (43%)
	b) others	13 (57%)
3	Parity	
	a) Primi	10 (43%)

	b)multi	13 (57%)
4	Age	
	a)<20	3 (13%)
	b)21-30	14 (61%)
	c)31-40	4 (17%)
	d)>40	2 (8%)

Table 3

S.no	Indication for relaparotomy	No.of cases
1	Haemoperitoneum	11 (48%)
2	Atonic PPH	5 (22%)
3	Retained foreign body	1 (4%)
4	Burst abdomen	1 (4%)
5	Broad ligament haematoma	1 (4%)
6	Rectus sheath haematoma	2 (8%)
7	Subacute Intestinal Obstruction	1 (4%)
8	Secondary PPH	1 (4%)

Haemoperitoneum has been the most common indication for relaparotomy in most of the studies conducted world wide except a few studies in which parietal wall haematoma and atonic PPH are the most common indications. In a study from Nepal, sepsis was the most common cause. In our study it is haemoperitoneum (48%). This is similar to that in studies conducted by Naseema Beevi Ahmed Khan from Kerala (44%). When analyzing the causes for haemoperitoneum, out of 11 cases, 4 cases were due to active bleeding from surgical site for which haemostasis was obtained by ligating the bleeding vessel.

One case of haemoperitoneum was aspirin induced. All other cases were due to associated coagulopathy. Resurgery had to be done in those cases to rule out active arterial bleeding and to fix a flank drain in order to prevent compartment syndrome. It is difficult to rule out arterial bleeding especially in the patient who has DIC and one has to decide for relaparotomy especially if prior pelvic drain has not been kept during the primary surgery.

Atonic PPH constituted 22% of cases for which subtotal hysterectomy was done during resurgery. Conservative surgery was not tried in those cases because of the poor general condition when decided for resurgery. In 4 (17.3%) cases subtotal hysterectomy was done for atonic PPH following caesarean section during the primary surgery and was reopened for presence of haemoperitoneum.

Table 4

s.no	Procedure done during resurgery	No. of cases
1	Residual hysterectomy	1 (4%)
2	Subtotal hysterectomy	7 (30%)
3	Securing the bleeding points	4 (17.3%)
4	Drainage of haemoperitoneum, peritoneal toileting and placement of drainage tube	5 (21.7%)
5	Release of adhesions	1 (4%)
6	Total hysterectomy	1 (4%)
7	Haematoma evacuation	2 (8%)
8	Retrieval of foreign body and peritoneal lavage	1 (4%)
9.	Closure of Rectus sheath	1 (4%)

One case was opened up for sub acute intestinal obstruction and adhesiolysis was done. A case of total hysterectomy was done for secondary PPH and the uterine scar was found to have necrosed due to infection. Bleeding vessels were ligated and haematoma evacuated for broad ligament and rectus sheath haematoma.

Two cases of second relaparotomy was done. Both were done for haemoperitoneum and were associated with coagulopathy following subtotal hysterectomy done during second surgery. In one case residual hysterectomy was done in which only the upper segment of the uterus had been removed for adherent placenta previa. The other case was opened for suspected arterial bleed and had nil findings during resurgery.

Almost 50% of the cases were in class 4 shock when the relaparotomy was performed. Time interval between primary surgery and reoperation ranged from 3.5 hours to 30 days. Excluding the cases of subacute intestinal obstruction, secondary PPH, secondary haemorrhage and foreign body retrieval, which took more than 48

hrs, the average duration of time between primary surgery and reoperation was 18.5 hrs. No correlation was found between time interval between the 2 surgeries and the outcome. Most of the primary surgeries were done during the day time.

Total deaths were 6 (26%) and all were obstetric cases. In other studies the mortality rates range from nil to 18.8% 1, 2, 3, 4, 5. Out of those 6 cases, 4 had subtotal hysterectomy done for atonic PPH, other 2 cases were operated for rectus sheath haematoma and haemoperitoneum associated with DIC. The cause of death was coagulopathy with multi organ failure in all cases except one which died due to septicemia. All cases which ended up in death presented with class 4 shock at the time of decision for relaparotomy and were associated with coagulopathy. Most of the cases underwent massive blood transfusion. Death occurred within a week in all cases.

Average duration of hospital stay excluding death cases was 13 days. Post op complications like need for ventilatory support, ARDS, renal failure, wound sepsis were managed.

CONCLUSION:

Relaparotomies can be prevented to some extent by adopting simple but important techniques during the surgical procedure. Early diagnosis of PPH by vigilant monitoring during the immediate post operative period and intervention before coagulopathy sets in will definitely reduce the incidence of relaparotomies and deaths. Early and adequate replacement of blood and blood products can prevent dilutional coagulopathy. Supervision of the surgeries done by the junior consultants by the experienced seniors must be followed. Double checking of the haemostasis and ruling out muscular bleed before abdominal closure must routinely be practised. Meticulous closure of the abdominal layers, minimizing the raw areas, securing perfect haemostasis and placement of drainage tube in the pelvic cavity in cases of anticipated coagulopathy will prevent massive haemoperitoneum leading to compartment syndrome and can allow conservative management.

Verification of pad and instrument count before closure of abdomen must be made mandatory. Avoiding abdominal closure when there is hypotension will prevent haemoperitoneum due to secondary haemorrhage. Adopting strict aseptic practices during surgery, verification of sterilization techniques and proper administration of antibiotics can prevent sepsis. Control of hypertension and sepsis postoperatively can prevent secondary haemorrhage. MTP can be done under ultrasound guidance. Proper traction to the cervix straightens the cervical canal and avoids false passage and perforation preventing occurrence of broad ligament haematoma.

A well equipped intensive care unit with adequate no. of trained staff nurses for intense monitoring of high risk postoperative cases plays an important role in prevention of death and management of complications.

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