Original Article

Dealing with rupture of uterus in a tertiary care hospital

Nihar Ranjan Behera[1*], Subhasis Panigrahy[2]

Department of OBGY, M K C G Medical College, Berhampur, Odisha, INDIA.
Email: nihar_behera18.5@rediffmail.com

Abstract

Rupture of uterus is a common obstetric problem in rural and less developed areas of our country. It is a major cause of maternal mortality and morbidity. Emergency laparotomy is done in all cases but the obstetrician has two choices. One has to choose between hysterectomy and repair of the rupture. Some prefer repair and some support hysterectomy. Hence the purpose of the present study was to compare two surgical procedures i,e. repair of rupture of uterus with subtotal hysterectomy so that the better method can be adopted for the patients. A prospective study was conducted with fourty five cases of rupture of uterus. Repair was done in twenty cases and in the rest subtotal hysterectomy was done. The results were compared and analysed. It was seen that it was possible to repair all cases of rupture. The operating time and blood loss was significantly less in the repair group and the post operative complications were comparable in the two groups. Hence repair of the uterine injury should be the method of first choice and not hysterectomy in cases of obstetric ruptures of the uterus.

Key Words: Repair, hysterectomy.

[*]**Address for Correspondence:**
Dr. Nihar Ranjan Behera, 203-Spectrum Greens, R C Dash Lane, Komapalli, 760004, Berhampur, Odisha, INDIA.
Email: nihar_behera18.5@rediffmail.com

Received Date: 13/12/2016 Revised Date: 28/01/2017 Accepted Date: 22/02/2017

Access this article online	
Quick Response Code:	Website: www.medpulse.in
	DOI: 04 February 2017

INTRODUCTION

Rupture of uterus is still very common in India specially in rural and less developed areas. It is one of the major causes of maternal mortality and mobidity.[1] It results mainly due to inability to diagnose CPD, contracted pelvis, malpresentation and malposition. Apart from this overuse and misuse of powerfull oxytosics like misoprostol has led to increase in the incidence of uterine ruptures. There is also a rise in the rate of primary caesarean sections leading to increase in the load of pregnancies with previous CS who are at increased risk of scar rupture. Usually in patients of rupture uterus emergency laparotomy has to be done. There are two options for the obstetrician. One has to choose between hysterectomy and repair of the rupture. Most of the obstetricians prefer doing a hysterectomy and many institutions adopt subtotal hysterectomy as a standard protocol for rupture of uterus. A significant proportion of patients who fall prey this obstetric disaster are nuliparous or without any living issues. Hence they always want to conserve their uterus for future pregnancy. More over most of these young patients want to preserve their menstrual function even if they don't prefer further childbearing. Because of these factors many surgeons favour doing repair rather than hysterectomy. Some also feel that repair is a quicker method of dealing as all obstetricians are familiar with stitching uterine wound in caesarean sections. Blood loss and injury to bladder and ureter is also considered to be less in repair by many. It is also a fact that many obstetricians prefer hysterectomy because they feel that repair is difficult to do because of the irregular nature of tear in ruptures and so have a tendency of not doing repair at all. As per literatures different authors quote different incidence of doing hysterectomy ranging from 38 % to 70 %. Therefore it is very important to know which one is better for the patient based on scientific evidence..Since our hospital is referral centre catering to a large part of southern Odisha we get a lot of cases of rupture of uterus. Keeping this background in mind the present study has been undertaken

How to site this article: Nihar Ranjan Behera, Subhasis Panigrahy. Dealing with rupture of uterus in a tertiary care hospital. *MedPulse – International Medical Journal.* February 2017; 4(2): 170-172. http://www.medpulse.in (accessed 06 February 2017).

MATERIALS AND METHOD

A prospective comparative study was conducted between august 2008 and august 2010 in the department of O and G, MKCG Medical college Hospital, Berhampur. Forty five cases of rupture uterus were admitted during this period and all were included in the study. They were diagnosed clinically and by USG. In twenty cases repair was done by the author during his duty hours and in the remaining twenty five cases subtotal hysterectomy was done by other residents on duty. In group 1 repair was done by no.1 chromic catgut taking continuous locking sutures preferably in two layers unless the edges were thin. Sometimes interrupted stitches were also taken to where tissues were likely to tear by continuous stitches. Oxytocin IV drip was routinely given in all cases to prevent atony of the uterus. Subtotal hysterectomy was done following the usual technique of clamping cutting and ligating the cornual structures and then the uterine arteries below the level of proposed excision of uterus. Extra procedures like compression sutures for uterine atony, internal iliac artery ligation and bladder repair were also done whenever required. Same antibiotics were given to both the groups ½ hr before surgery. Cases were followed up and compared with respect to the following parameters

1. Operating time
2. Blood loss during surgery
3. Intraoperative problems and complications.
4. Post operative complications like-
5. Febrile illness
6. Bowl distension
7. Intestinal obstruction
8. Peritonitis
9. Septicemia
10. Wound infection
11. Urologic injuries
12. Hospital stay

The datas obtained were recorded and analyzed statistically to reach at a conclusion.

OBSERVATIONS AND RESULTS

There occurred 9640 deliveries during the study period in the institution and 50 cases of ruptures were admitted during this period so the incidence is 1 in 200 deliveries.

Table 1: Distribution of cases as per age

Age	No of repairs done	Percentage	No of hysterectomies done	%
18 – 25	5	25	4	16
26 -30	11	55	13	52
31 – 35	4	20	8	32

P = 0.082

Majority of cases were in the age group of 26 years to 30 years and both group of patients were similar in their age distribution.

Table 2: Distribution of cases as per parity

Parity	Repair	percentage	Hysterectomy	percentage
P_0	3	15	4	16
P_1	8	40	8	32
P_2	4	20	5	20
P_3	3	15	4	16
P_4	2	10	3	12
P_5	0	0	1	4

P = 0.25

Majority of the patients were para 1 and para 2. There was no significant difference in the parity of the two group of patients.

Table 3: Feasibility of completing the procedure

Proceedure	Total no of cases selected for surgery	Total no of cases successfully completed	Percentage
Repair of rupture	20	20	100
Hysterectomy	25	25	100

The above table shows that it not impossible to repair all cases of rupture of uterus. In our study all cases taken up for repair could be completed successfully.

Table 4: Intra operative events

Inraoperative event	Repair group	Hysterectomy group	P value
Avg. operating time	40 min	55 min	< 0.05
Avg. blood loss	45 ml	110	<0.05
Injury to bladder and ureter	0	1	<0.05
Atony of uterus	4	0	<0.05

The table above shows that the operating time for repair and the blood loss is significantly less in the repair group when compared to hysterectomy. Injury to ureter occurred in one case of hysterectomy but in non of the repair cases. However in four cases the uterus remained atonic after the repair inspite of adequate oxytosics and compression sutures has to be given to control bleeding.

Table 5: Postoperative complications

Complication	Repair group	Hysterectomy group	P value
Febrile morbidity	5	4	0.05
Sub acute intestinal obstruction	2	2	0.05
	3	4	0.05
Peritonitis	2	1	< 0.05
Septicemia	1	0	< 0.05

The above table shows that there is no significant difference in the post operative complications in the two

group of cases except the incidence of post operative infections which is more in cases of repair.

DISCUSSION

It was observed that it is possible to do the repair in all cases of rupture though irregular injuries required a little more time. The operating time for repair is significantly less compared to hysterectomy and the associated blood loss is significantly less. Since obstetricians are already l well-versed with repair of uterine wound in caesarean sections the learning curve is short. The same technique of repair with chromic catgut with little patience and gentleness is all that is needed. Juniors if taught this attitude will definitely go ahead with this quick and easy procedure. Postoperative complications were comparable in the two groups though there is slight increase in the rate of infection in the repair group.In one case there was severe sepsis resulting in septisemia. This was the case where rupture had occurred 16 hours before surgery following obstructed labour with necrotic margins. It has been observed in other studies repair leads to lesser blood loss and lesser morbidities compared to hysterectomy.[2] It has also been observed by other authors that 80 % of surgeons prefer doing repair of the uterine rupture than doing a hysterectomy.[3] Rupture uterus is a emergency situation and the usual recommendation is to go for easiest and shortest procedure.[4] However for those cases referred with established sepsis subtotal hysterectomy is a preferred procedure.[5]

CONCLUSION

Blind decision to go ahead with hysterectomy should never be done. Repair of the uterine wound is possible in majority of cases. It is not difficult and has a short learning curve. Hence repair should be tried in every case unless there is increased chance of postoperative sepsis. It will give the women a chance to preserve her fertility and her menstrual function. Hysterectomy should be reserved for cases where there are signs of sepsis like fever, purulent or fowl smelling liquor, rupture of more than 12 hours duration, unhealthy and necrotic margins and extensive injury which are unlikely to be repaired. In any case the rate of repair should be more than 70%.

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Source of Support: None Declared
Conflict of Interest: None Declared