

Twenty cases of uterine rupture during pregnancy were studied.

Zhang H^{1*}, Qin Y¹, Shi D² and Jin C³

ABSTRACT

*¹Department of Obstetrics, Hebei Medical University, Fourth Hospital, Shijiazhuang, People's Republic of China

²Department of Obstetrics, Cangzhou Central Hospital, Cangzhou, People's Republic of China

³Department of Obstetrics, Huantai Maternal and Child Health Hospital, Shandong, Huantai Maternal and Child Health Hospital of Zibo City in Shandong Province, People's Republic of China

Corresponding Author:

Huixin Zhang, Department of obstetrics, Hebei Medical University, Fourth Hospital, Shijiazhuang, People's Republic of China

Received Date : July 26, 2023

Accepted Date : July 30, 2023

Published Date : Aug 28, 2023

Objective : To explore the incidence, the danger factors, early signs, treatment and preventive measures of female internal reproductive organ rupture throughout physiological condition.

Methods : Patients with female internal reproductive organ rupture were retrospectively collected within the Fourth Hospital of Hebei Medical University, Cangzhou Central Hospital and Huantai Maternal and kid Health Hospital of Zibo town in Shandong province in China from Gregorian calendar month 2012 to Dec 2018. Maternal age, physiological state week, times of physiological condition, parity, surgical history, the symptoms and signs of female internal reproductive organ rupture furthermore as management and perinatal outcomes were analyzed.

Results : The incidence of female internal reproductive organ rupture was four.6/10 000 (20/43841). Seventeen cases had a history of caesarean, one had a history of laparoscopic myomectomy, one had a history of hysteroscopic surgery and one case has no history of female internal reproductive organ surgery. Abdominal pain and abnormal foetal vital sign square measure common clinical manifestations. Among the twenty patients with female internal reproductive organ rupture, 13 (65%) occurred within the trimester, as well as four cases of childbearing once cesarean, one case iatrogenic by hormone, and therefore the different eight cases of spontaneous female internal reproductive organ rupture. Six cases (30%) of female internal reproductive organ rupture in mid- physiological condition were abortion by rivanol or drug abortion by abortifacient and misoprostol. Seventeen cases were complete female internal reproductive organ rupture and three cases were incomplete female internal reproductive organ rupture, all were confirmed by surgery. One patient underwent subtotal excision for secondary infection and therefore the rest underwent female internal reproductive organ repair. within the trimester, there have been thirteen cases and four cases of spontaneous abortion (two cases had no foetal heart initially designation, 2 cases had cardiac arrhythmia before operation and therefore the assay of emergency caesarean was 0). Severe babe physiological state occurred in one case and delicate physiological state in three cases, all were transferred to babe medical aid unit (NICU) for more treatment. The 1-minute assay of the opposite five neonates was 9/10.

Conclusion : Scarred female internal reproductive organ is that the commonest reason for female internal reproductive organ rupture. Reducing the speed of caesarean is an efficient live to forestall female internal reproductive organ rupture. Abdominal pain and abnormal foetal vital sign square measure common clinical manifestations. Maternal and kid outcomes may be improved if female internal reproductive organ rupture may be early diagnosed and surgery performed in time.

Keywords : Uterine rupture, Pregnancy, VBAC, Caesarean section

INTRODUCTION

Uterine rupture outlined because the tearing of the female internal reproductive organ wall throughout maternity or delivery is one among the rare however serious acute abdomens in medicine, resulting in ablation of mother, abnormality and even vertebrate death in female internal reproductive organ, if the diagnosing and treatment is delayed.

The clinical information of twenty patients with female internal reproductive organ rupture throughout maternity were retrospectively analyzed to explore the incidence of female internal reproductive organ rupture, connected factors, early clinical signs, maternal and child outcomes and diagnosing and management, thus on accomplish early identification and treatment of female internal reproductive organ rupture and improve maternal and child outcomes.

MATERIALS AND WAYS

Patients

Patients with female internal reproductive organ rupture were collected within the Fourth Hospital of Hopei Medical University, Cangzhou Central Hospital and Huantai Maternal and kid Health Hospital of Zibo town in Shandong Province in China from January 2012 to December 2018. There were twenty cases completely, all case were confirmed by surgery.

Diagnosis

Complete female internal reproductive organ rupture refers to the rupture of the full layer of the female internal reproductive organ muscle wall, and therefore the cavity is connected with the abdomen. Incomplete rupture of female internal reproductive organ refers to the rupture of half or whole female internal reproductive organ muscle layer, however the membrane layer is unbroken, the cavity isn't connected with the abdomen and therefore the foetus and its appendages stay within the cavity.

METHODS

Dates of every patient were recorded and analyzed retrospectively, together with maternal age, physiological state week, times of maternity, parity, history of past operation, symptoms and signs of female internal reproductive organ rupture still because the management and perinatal outcomes.

RESULTS

1. The incidence of female internal reproductive organ rupture: a complete of twenty cases of female internal reproductive organ rupture were collected, and therefore the range of hospital delivery within the same amount was 43841, the incidence of female internal reproductive organ rupture was four.6/10,000. The incidences of female internal reproductive organ rupture within the 3 completely different levels of medical establishments were five.1/10 000, 8.0/10 000 and one.6/10 000, severally.

2. Date collection: among the twenty cases of female internal reproductive organ rupture, the patient aged from twenty four to thirty-nine years recent, and therefore the physiological state weeks were from twelve to 42+2 weeks. Seventeen cases had a history of caesarean delivery, one case had a history of laparoscopic myomectomy, one had a history of hysteroscopic surgery and one case has no history of female internal reproductive organ surgery. Twenty patients were coded as case one to case twenty (Table 1).

Symptoms and signs at the instant of diagnosing

Common clinical manifestations were abdominal pain, abnormal vertebrate heart and epithelial duct hurt. kind of abdominal pain: 10 patients given with persistent, severe abdominal pain. One patient given with irregular lower abdominal pain, that was misdiagnosed as vulnerable preterm labor within the hospital wherever she 1st visited. One patient given with excessive female internal reproductive organ contractions, and each of the 2 patients eventually suffered from vertebrate arrhythmia.

Time and inducement of female internal reproductive organ rupture

Among the twenty patients with female internal reproductive organ rupture, 13 (65%) occurred within the trimester, together with four cases of birthing when cesarean, one case induced by endocrine, and therefore the different eight cases of spontaneous female internal reproductive organ rupture. Six cases (30%) of female internal reproductive organ rupture in mid-pregnancy were abortion by rivanol or drug abortion by Mifepristone and misoprostol

Perinatal outcomes

Among the twenty patients, seventeen cases were complete female internal reproductive organ rupture and 3 cases were incomplete female internal reproductive organ rupture, all were confirmed by surgery. One patient underwent subtotal ablation

for secondary infection and therefore the rest underwent female internal reproductive organ repair. postnatal hemorrhage occurred in 9 patients (45%) (Estimated blood loss>1000 ml). there have been thirteen cases of female internal reproductive organ rupture within the trimester and four cases suffered from spontaneous abortion (two cases had no vertebrate heart initially diagnosing, 2 cases had arrhythmia before operation and therefore the Apgar score of emergency caesarean was 0). Severe baby physiological condition occurred in one patient and delicate physiological condition in 3 patients, all were transferred to baby medical aid unit (NICU) for additional treatment. The 1-minute APGAR innumerable the opposite 5 neonates were 9/10.

DISCUSSION

Uterine rupture is associate obstetrical emergency related to severe maternal and perinatal morbidity and mortality. The incidence of female internal reproductive organ rupture varies from country to country and will increase with rates of meant channel delivery when caesarean. In 2018, the Nordic obstetrical police work study rumored a group of knowledge [1]. The incidence of female internal reproductive organ rupture was seven.8/10 000 in Suomi and four.6/10 000 in Denmark. .In this study, the 3 medical establishments were of various levels, and therefore the incidence of female internal reproductive organ rupture in grass-roots county-level hospitals was under that in provincial hospitals (1.6/10000 vs. 5/10000). it absolutely was believed that provincial hospitals received additional referrals from different hospitals, and therefore the proportion of bad gestation was high. additionally significantly, it absolutely was associated with the channel delivery when cesarian section.

Risk factors for female internal reproductive organ rupture throughout gestation or delivery are rumored within the literature, together with advanced age, macrosomia, expired gestation, short delivery interval, range of cesarian section operations, single-layer suture of female internal reproductive organ incision, channel trial of gestation when cesarian section and gestation when laparoscopic hysteromyoma removal or hysteroscopic surgery. For those that had no previous history of female internal reproductive organ surgery, female internal reproductive organ rupture was thought-about to be associated with the weakness of smooth muscle caused by female internal reproductive organ innate development or trauma, multiple births and therefore the use of female internal reproductive organ contraction-promoting medicine. In recent years, with the

event of medicine scrutiny technology, the amount of pregnant ladies WHO underwent laparoscopic myomectomy and endoscopy surgery is increasing and therefore the incidence of female internal reproductive organ rupture is additionally increasing. With the rise of physiological state weeks, the intrauterine pressure step by step will increase, and therefore the myofibrillar rupture is that the direct reason behind female internal reproductive organ rupture. Therefore, female internal reproductive organ rupture is vulnerable to occur in late gestation. The incidence of female internal reproductive organ rupture when laparoscopic myomectomy was zero.3%-1% [2,3]. during this study, one patient had a history of laparoscopic myomectomy.

At 39 weeks of gestation, severe abdominal pain and vertebrate arrhythmia occurred. A stillborn baby was born throughout the operation. A longitudinal rupture of the anterior wall of the female internal reproductive organ concerning twelve cm. long was found that older rock bottom to the posterior wall of the female internal reproductive organ. One patient had undergone transcervical surgical procedure of septum in a very native county hospital. Abdominal pain occurred at thirty four weeks of gestation. The pain was delicate at the start. within the initial hospital it absolutely was misdiagnosed as vulnerable preterm birth. Abdominal pain aggravated three days later. The pain was primarily round the canal and higher abdomen, in the course of nausea and emesis. The patient was transferred to our hospital as "acute pancreatitis". when admission, severe abdominal pain, shock symptoms and vertebrate arrhythmia (60 times/min) developed. Emergency surgery was performed. female internal reproductive organ rupture was found throughout the operation. The rupture was settled at rock bottom of the female internal reproductive organ, concerning three cm in size and therefore the muscle layer close to the rupture was skinny (Figure 1). Apgar score was zero when vertebrate delivery, however it didn't recover when forty min of rescue. 2 patients underwent female internal reproductive organ repair, the mother recovered swimmingly. thanks to the atypical symptoms, she uncomprehensible the simplest chance for surgery and abnormal condition even intrauterine abortion occurred, resulting in medical disputes. during this study, six cases of female internal reproductive organ rupture in mid-pregnancy were associated with abortion by rivanol or abortion pill combined with misoprostol in scarred female internal reproductive organ. Some patients even had irregular labor induction, female internal reproductive organ rupture wasn't detected in time and per week later, they were transferred to

a tertiary hospital wherever serious cavum infection and girdle infection had occurred, thus extirpation had to be performed.

The clinical manifestations of female internal reproductive organ rupture area unit diversified . Typical female internal reproductive organ rupture is simple to diagnose consistent with its history, symptoms and signs. abnormal condition is taken into account to be the foremost common clinical manifestation. different common clinical manifestations embody severe abdominal pain, abnormal channel injury, hematuria, cardiac arrhythmia, cardiovascular disease and shock in pregnant ladies. B ultrasound is that the most well-liked diagnostic technique. Once ultrasound prompted serous membrane effusion, female internal reproductive organ rupture ought to be thought-about combined with clinical manifestations. during this study, twelve patients (60%) had abdominal pain: ten patients showed persistent and severe abdominal pain. One patient conferred with irregular lower abdominal pain, misdiagnosed as vulnerable premature delivery within the hospital wherever she 1st visited. One patient conferred with abnormal muscle contraction (excessive female internal reproductive organ contractions), and 2 patients eventually developed vertebrate arrhythmia. A literature from Taiwan in 2016 rumored that severe abdominal pain in the course of movement is also associate early sign of female internal reproductive organ rupture [4]. Abnormal vertebrate heart observance is that the most direct technique to diagnose abnormal condition. Some students believe that the late swiftness or variable swiftness is also the primary symptom of female internal reproductive organ rupture. during this study, intrauterine abortion occurred in seven patients with abnormal vertebrate heart and a couple of had no vertebrate heart initially designation. Four cases conferred with vertebrate arrhythmia, one with arrhythmia in the course of frequent delayed swiftness. 2 infant were transferred to NICU thanks to severe infant physiological state, and 3 patients suffered from abortion throughout operation.

CONCLUSION

Once female internal reproductive organ rupture is diagnosed, the operation ought to be applied as before long as attainable. it's the key to avoid wasting vertebrate life and maternal womb to open the inexperienced channel and race against the clock. For risky ladies while not fertility needs, contraceptive measures ought to be taken to avoid excess evoked labor, scale back cavum operation and therefore the incidence of female internal reproductive organ rupture. Clinicians ought to grasp strictly

the indications of medicine myomectomy and endoscopy, handle the link between hysteromyoma and gestation, make sure the suture beneath laparotomy, and improve endoscopy technology. At an equivalent time, we'd like to form our greatest {to scale back|to scale back|to cut back} the speed of cesarian section and reduce the incidence of female internal reproductive organ rupture.

REFERENCES

1. Colmorn LB, Langhoff-Roos J, Jakobsson M, Tapper AM, Gissler M, et al. (2017) National rates of uterine rupture is not associated with rates of previous caesarean delivery: Results from the Nordic Obstetric Surveillance Study. *Pediatr Perinat Epidemiol* 31: 176- 182.
2. Koo YJ, Lee JK, Lee YK, Kwak DW, Lee IH, et al. (2015) Pregnancy outcomes and risk factors for uterine rupture after laparoscopic myomectomy: A Single- center experience and literature review. *J Minim Invasive Gynecol* 22: 1022-1028.
3. Hoffmeyr GJ, Say L, Gulmezoglu AM (2005) WHO systematic review of maternal mortality and morbidity: The prevalence of uterine rupture. *BJOG* 112: 1221- 1228.
4. Kawabe A, Wang L, Kikugawa A, Shibata Y, Kuromaki K, et al. (2016) Severe abdominal pain exacerbated by fetal movement is an early sign of the onset of uterine rupture. *Taiwan J Obstet Gynecol* 55: 721-723.