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Analysis on 50 cases of emergency hysterectomy.

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Abstract

Objective: This paper aims to discuss the influencing factors and the method for reducing emergency hysterectomy.

Method: The clinical data of 50 patients treated with emergency hysterectomy in our hospital from January of 2007 to March of 2017 were collected from the hospital information system.

Results: A total of 14,253 women had institutional delivery in our hospital from January of 2007 to March of 2017, and 50 patients (0.35%) were treated with emergency hysterectomy. Their ages ranged from 24-45 y (33.52 ± 5.23 in average). They are all multipara, with maximums of eight pregnancies and three deliveries. Their average gestational age was 33.52 ± 5.01 w. Placental implantation (21 cases), pernicious placenta previa (20 cases), and central placenta previa (19 cases) were the three primary reasons for emergency hysterectomy. Among the 50 patients, 47 chose cesarean delivery to terminate pregnancy. The average amount of blood loss was 2,994.00 ± 1,268.84 ml. With respect to hysterectomy mode, total and subtotal hysterectomies were performed in 18 and 31 patients, respectively. In addition, 36 patients had hysterectomy during the operation, and the rest had hysterectomy 24 h after the operation. Two patients suffered ureteral injury, and one had urinary system injury.

Conclusions: Emergency hysterectomy is the ultimate saving method for postpartum hemorrhage, and placental factors are the major causes of hysterectomy. Hysterectomy can reduce the death rate of patients, but it has a negative psychological effect on puerpera. Therefore, appropriate and effective interventions should be adopted to prevent hysterectomy. If hysterectomy is necessary, the indications of the operation must be understood and the appropriate hysterectomy method should be implemented at the appropriate time to reduce injuries to puerpera to the maximum extent.

Keywords: Obstetrical department, Emergency treatment, Hysterectomy.

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Introduction

Postpartum hemorrhage is a serious threat to the safety of pregnant women and puerpera. According to statistics, postpartum hemorrhage is an important cause of death of pregnant women and puerperal [1,2]. Some statistical data even reported that the deaths of pregnant women and puerpera caused by postpartum hemorrhage in West China and underdeveloped regions account for over 50% of all deaths in the obstetrical department. Positive, effective, and correct interventions should be adopted immediately upon the occurrence of postpartum hemorrhage [3]. Although associated problems have been studied for years and several countermeasures have been developed, emergency hysterectomy is still the most effective intervention for patients with postpartum hemorrhage based on long-term practices. Hence, it is considered as the ultimate method for saving patients with postpartum hemorrhage in most hospitals [4]. Hysterectomy can cut the hemorrhagic source of patients quickly and save puerpera. However, several studies demonstrated that although hysterectomy can save the life of puerpera, it causes mental and psychological injuries to puerpera that they could not recover from [5]. Recent studies generally believed that postpartum hemorrhage is mainly caused by placental factors and related to multiple pregnancies and repeated intrauterine operations. This paper presents a retrospective analysis on the obstetrical factors of 50 hysterectomy cases in the recent 10 y in our hospital, and patients' conditions were described to provide a theoretical basis for hysterectomy. Results are introduced in the following section.

Research Objects and Methods

Research objects

Fifty cases of emergency hysterectomy in our hospital from January of 2007 to March of 2017 were the research subjects. Their ages ranged from 24-45 y (33.52 ± 5.23 in average). This study was approved by the Medical Ethics Committee of our hospital, and all patients and family members signed the Informed Consent.

Inclusion standards

Patients treated with hysterectomy in the obstetrical department of our hospital.

Patients and family members agreed to disclose associated information.

Patients were conscious and can express themselves accurately.

Patients and family members were informed of the study content and signed the Informed Consent.

Exclusion standards

Patients or family members refused to offer related disease data.

Patients or family members refused to sign the Informed Consent.

Research method

Related clinical data of emergency hysterectomy from January of 2007 to March of 2017 were collected from the health information system with the consent of patients and family members. Data were analysed, and several conclusions were drawn.

Statistical analysis

SPSS 20.0 was applied for statistical processing. Enumeration data were expressed in percentage.

Results

General information of patients

A total of 14,253 women had institutional delivery in our hospital from January of 2007 to March of 2017, and 50 patients (0.35%) were treated with emergency hysterectomy. Their ages ranged from 24-45 y (33.52 ± 5.23 in average). They are all multipara, with maximums of eight pregnancies and three deliveries. Their average gestational age was 33.52 ± 5.01 w. Tables 1 and 2 show the time of hysterectomy and history of pregnancy and birth, respectively.

Table 1. *Time of hysterectomy.*

Year	Number of cases (n)	Proportion (%)
2007	2	4.00
2008	2	4.00
2009	1	2.00
2010	4	8.00
2011	4	8.00
2012	2	4.00
2013	9	18.00
2014	5	10.00
2015	8	16.00
2016	11	22.00
2017	2	4.00

Table 2. *History of pregnancy and birth.*

Diagnosis	Number of cases (n)	Incidence rate (%)
Cesarean delivery	35	70.00
Induced abortion	31	62.00
Eutocia	17	34.00
Spontaneous abortion	5	10.00

Diagnosis distribution of patients

Among the 50 cases, placental implantation (21 cases), pernicious placenta previa (20 cases), and central placenta previa (19 cases) were the three primary reasons of emergency hysterectomy. Specific diagnoses are shown in Table 3.

Table 3. *Diagnosis of 50 cases.*

Diagnosis	Number of cases (n)	Incidence rate (%)
Placental implantation	21	42.00
Pernicious placenta previa	20	40.00
Central placenta previa	19	38.00
Hysterorrhexis	4	8.00
Postpartum hemorrhage	4	8.00
Postpartum hemorrhage	4	8.00
Scarred uterus	3	6.00
Secondary uterine inertia	3	6.00
Poor healing of uterus incision	2	4.00
Postoperative infection	2	4.00
Heart disease	2	4.00
Adherent placenta	2	4.00
Thrombocytopenia	1	2.00
Fetal macrosomia	1	2.00
Intrahepatic cholestasis of pregnancy	1	2.00
Cystorrhexis	1	2.00
Intestinal injuries	1	2.00
Breech presentation	1	2.00
Severe preeclampsia	1	2.00
Endometritis	1	2.00
Necrotic hysteritis	1	2.00
Oligohydramnios	1	2.00

Infection of uterus cavity	1	2.00
Pulmonary hypertension	1	2.00
DIC	1	2.00
Premature delivery	1	2.00
Antepartum hemorrhage	1	2.00
Lupus nephritis	1	2.00
Endometrial stromal tumor	1	2.00

Related surgical indicators of 50 cases

Among the 50 cases, 47 chose cesarean delivery as the mode of terminating pregnancy. The average amount of blood loss was 2,994.00 ± 1,268.84 ml. With respect to the hysterectomy mode, 18 adopted subtotal hysterectomy and 31 had total hysterectomy. Meanwhile, 36 cases had hysterectomy during the operation, and the rest had hysterectomy 24 h after the operation. Two patients suffered ureteral injury, and one had urinary system injury. Tables 4 and 5 show the modes of terminating pregnancy and the amount of blood loss, respectively.

Table 4. *Modes of terminating pregnancy.*

Diagnosis	Number of cases (n)	Proportion (%)
Cesarean delivery	47	94.00
Eutocia	2	4.00
Curettage	1	2.00

Table 5. *Amount of blood loss.*

Amount of blood loss (ml)	Number of cases (n)	Proportion (%)
<1000	1	2.00
1000	0	0.00
1200	1	2.00
1400	4	8.00
1600	0	0.00
1800	0	0.00
2000	4	8.00
2200	1	2.00
2400	11	22.00
2600	0	0.00
2800	0	0.00
3000	11	22.00
3200	0	0.00
3400	1	2.00
3600	2	4.00
3800	0	0.00
4000	3	6.00
4200	0	0.00
4400	2	4.00
4600	0	0.00
4800	0	0.00
5000	9	18.00

Discussions

A total of 14,253 women had institutional delivery in our hospital from January of 2007 to March of 2017, and 50 patients (0.35%) were treated with emergency hysterectomy. This number is close to the domestic reports of 0.2%-4%. The probability of performing hysterectomy in cesarean delivery in developed European and American countries is significantly higher than normal vaginal delivery. According to research results, the proportion of patients who had hysterectomy during normal vaginal delivery is less than 0.03%, which remained stable for several years. In contrast, hysterectomy in cesarean delivery is slightly higher.

In this study, placental factors were the major causes of emergency hysterectomy, which is consistent with most reports. They are the most important causes of metrorrhagia. Placenta previa is the most important cause, which is also consistent with most reports. Multipara and multigravida account for a large proportion in the 50 cases. Multiple intrauterine operations or inaccurate operations can easily cause damage and endometrial hemorrhage, thereby causing infection and imperfect intimal restoration, which finally result in placenta previa [6]. In cases of placenta previa, the placenta is hyponastic, while the middle and lower muscular layers and the tunica intima are relatively thin with poor contractility. Blood sinus is difficult to heal with adherent placenta, thus causing hemorrhage. No unified standard on the value and time of hysterectomy exists [7]. Doctors often rely on their experiences and the conditions of patients. Nevertheless, hysterectomy must be performed to save lives during serious hemorrhages and the invalidity of conservative treatment. All 50 patients in this study were treated with positive hemostasis measures before hysterectomy, including uterine contraction drugs and uterus massage. All patients were saved successfully, indicating that accurate evaluation of hemorrhage and amount of blood loss and performing hysterectomy at the appropriate time can save patients' lives. The uterus is a prerequisite of menstruation, which is the symbol of womanhood. Total hysterectomy will cause certain psychological pressure on women. Some women will even experience depression. Therefore, doctors must master all surgical indicators strictly before the operation and must communicate with the patients' family members.

Generally, subtotal hysterectomy is the first choice of doctors. It not only takes a shorter time and avoids damage to the ureter but can retain blood vessels and several structures (e.g., cervix uteri, isthmus, and intima) of the uterus [8,9]. Moreover, the

bleeding period after the operation is certain, and it reserves some of the endocrine functions of the uterus. However, total hysterectomy is required in cases of placenta previa, placental implantation, or hysterorrhexis [10]. In this study, 35 cases had total hysterectomy and 15 had subtotal hysterectomy, indicating the high proportion of cervix uteri damages.

Conclusion

Therefore, emergency hysterectomy is the ultimate method for saving puerpera with postpartum hemorrhage. Placental factors are the major causes of emergency hysterectomy. Hysterectomy can decrease the death rate of patients. However, it has negative psychological impacts on puerpera. Effective interventions should be adopted according to the causes to prevent hysterectomy. If hysterectomy is necessary, the operation indications must be understood and the appropriate hysterectomy method should be implemented at the appropriate time to reduce injuries to puerpera.

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