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Peripartum hysterectomy in a teaching hospital in the eastern region of Turkey

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Abstract

Objectives: The aim of this study was to find the incidence and clinical implications of peripartum hysterectomy in our hospital at the Eastern region of Anatolia.
Study design: We analyzed retrospectively all cases of peripartum hysterectomy performed at YYU Medical Faculty Hospital between January 1995 and April 2003. Emergency peripartum hysterectomy was performed for hemorrhage which cannot be controlled with other conventional treatments within 24 h of a delivery. There were 24 cases of emergency peripartum hysterectomy performed.
Results: The incidence of emergency peripartum hysterectomy was 5.09 per 1000 deliveries. Half of the hysterectomies followed cesarean section. Eleven patients were referred to our clinics from other hospitals. Uterine atony (45.8%) was the most common indication and placenta accreta (25.0%) was the second most common. Eighteen patients (75%) had subtotal hysterectomy. Bladder injury was seen in three cases. Re-exploration was performed in three cases (12.5%). Seventeen patients stayed in hospital over 7 days. There were four (16.7%) maternal deaths all of whom were referred from other hospitals.
Conclusion: The mortality and morbidity of performing a peripartum hysterectomy is elevated, especially if performed in critical patients referred from other hospitals.

Keywords: Peripartum; Hysterectomy; Emergency

1. Introduction

Peripartum hysterectomy was first proposed at the end of the 19th century in order to prevent maternal death from uterine hemorrhage and sepsis after prolonged labor. The first successful operation was performed in 1876 [1]. The reported incidence of peripartum hysterectomy varies from 0.2 [2] to 2.70 in 1000 deliveries [3]. Emergency peripartum hysterectomy was defined as a hysterectomy performed for life threatening hemorrhage which cannot be controlled with more conservative measures within 24 h of a delivery [4]. In the past, the most common indications for emergency peripartum hysterectomy were uterine atony and uterine rupture [5,6]. More recent reports list placenta accreta as the most common indication and placenta accreta is most likely related to the increased number of cesarean deliveries observed over the past two decades [7–9].

The aim of this study was to find the incidence and clinical implications of peripartum hysterectomy in a university hospital at the eastern region of Anatolia.

2. Materials and methods

We analyzed retrospectively all cases of peripartum hysterectomy performed at Yüzüncü Yıl University Medical Faculty Hospital between January 1995, and April 2003. There were 24 peripartum hysterectomies identified. Emergency peripartum hysterectomy was performed for hemorrhage which cannot be controlled with other conventional treatments defined as curetting of the placental bed, the use of blood products, oxytocics and prostaglandins within 24 h of a delivery.

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Hospital charts were reviewed for maternal demographic data such as age, parity, gravidity, gestational age, previous cesarean delivery, previous uterine curettage, previous uterine surgery, mode of delivery. The indication and type of hysterectomy, the length of the operation, pre- and postoperative hemoglobin values, need for blood transfusion, postoperative complications and postoperative hospitalization days were recorded. Women delivering with a gestational age less than 24 weeks were excluded. The length of the operation was obtained from the maternal anesthetic records. Transfusions registered were the number of blood units and fresh frozen plasma units given during hospitalization. Febrile morbidity was defined as a temperature of 38° Celsius measured at least 24 h after the hysterectomy and repeated at least once. All cases were subdivided and compared according to parity (multiparous–grandmultiparous), mode of delivery (postpartum–postcesarean), hysterectomy type (subtotal–total) and patient type (our patients–patients referred from other hospitals).

Statistical analysis: The statistical analyses were conducted with the ''SPSS for windows'' package program. When the Kolmogorov–Smirnov normality test revealed normal distribution, we used independent sample *t*-test for comparing the differences between groups (multiparous with grandmultiparous; postpartum with postcesarean; subtotal hysterectomy with total hysterectomy and our patients with patients referred from other hospitals) and defined as mean ± standard deviation. When the test failed, paired comparisons were made by the Wilcoxon signed rank test and the Mann–Whitney *U*-test was used to compare the differences between groups (multiparous with grandmultiparous; postpartum with postcesarean; subtotal hysterectomy with total hysterectomy and our patients with patients referred from other hospitals) and defined as median (minimum–maximum). Percentages were compared with the χ^2-test. The level of significance was set at 5%.

3. Results

During the 7-year study period, there were 4716 deliveries with 24 emergency peripartum hysterectomies identified (rate of 5.09 per 1000 deliveries). When referrals from other hospitals were excluded, rate was 2.75 per 1000 deliveries.

The mean maternal age was 34.04 ± 8.04 years. Mean gestational age was 37.52 ± 4.22 weeks (range 28–40 weeks) with a mean birth weight of 2840 ± 999 g (range 800–4750 g). The median number of gravidity was 8.00 (range 1–15). There were two (8.3%) primiparous and 22 (91.7%) multiparous women. Fourteen (58.3%) patients were grandmultiparous (parity > 5) (Table 1). During the study period, the total number of grandmultiparity patients delivered is 1183 which constitutes 25% of all delivered women. Only one of 24 women had antepartum follow-up. Nineteen patients had a low socioeconomic status. Thirteen patients were delivered at our hospital while the rest was referred from other hospitals.

Table 1
Demographic and clinical characteristics of women with emergency peripartum hysterectomy

Characteristics	
Age (years)	34.04 ± 8.04 (22–50)
Gravidity	8.00 (1–15)
Parity	6.00 (1–13)
Gestational age (weeks)	37.52 ± 4.22 (28–40)
Previous cesarean section; *n* (%)	3 (12.50%)
Previous hysterotomy; *n* (%)	1 (4.17%)
Previous curettage; *n* (%)	3 (12.50%)
Operating time (min)	132 ± 29 (110–190)
Postoperative hospitalization days	9.81 ± 5.30 (1–21)
Blood transfusions (units)	5.24 ± 4.35 (1–20)
Fresh frozen plasma (units)	4.75 ± 3.73 (2–11)
Internal iliac artery ligation	8 (33.33%)

Results are expressed as mean ± standard deviation (range) unless specified.

Of these 24, a total of 12 (50%) women had cesarean section. Twelve (50%) had spontaneous vaginal delivery. The indications for current cesarean section were five placenta previa (41.66%) (two of them were with a history of previous cesarean section), three (25.00%) placental abruption, two (16.66%) preeclampsia, one (8.33%) previous cesarean section and one (8.33%) fetal distress. Three (12.5%) of the women had a previous cesarean section history. One patient had one and two patients had two previous cesarean sections. One patient had previous myomectomy and three patients had uterine curettage. The uterus was unscarred in 20 patients.

The indication for hysterectomy was hemorrhage which cannot be controlled with more conservative treatment approaches defined as vigorous fundal massage, multiple oxytocic administrations (rapid oxytocin infusion, intramuscularly methylergonovine, rectal prostaglandin E2), bimanual uterine compression, use of blood products, and curetting of the placental bed within 24 h of a delivery. The operation and pathology reports were used to determine the indication of the procedure. The indications for hysterectomy in all patients were uterine atony (45.8%), placenta accreta (25.0%), uterine rupture (20.8%) and placenta previa without accreta (8.3%) (Table 2). Indication of hysterectomy was placenta accreta in both primiparous

Table 2
Indications for emergency peripartum hysterectomy

Indications	*N* (%)
Uterine atony	11 (45.8%)
Placenta accreta	6 (25.0%)
With previa	3
Without previa	3
Uterine rupture	5 (20.8%)
Placenta previa without accreta	2 (8.3%)
Total	24 (100%)