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Emergency peripartum hysterectomy: 10-year experience in a greek public maternity unit

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SUMMARY: Emergency peripartum hysterectomy: 10-year experience in a greek public maternity unit.

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Objectives: *The aim of the study was to evaluate the current maternal obstetrical risk associated with different modes of delivery, concerning postpartum hysterectomy.*

Material and methods: *In this retrospective study we collected data from the Birth Registry of the Delivery Room in our Obstetrics Department at the Perfectural General Hospital "Tzaneio" of Piraeus. The study period was from January 1995 to December 2004. All the women that underwent postpartum hysterectomy during the study period were included in the study.*

Results: *13 women met the inclusion criteria during the study period. Nine of them underwent postpartum hysterectomy during caesarean section (69,24%), two of them after instrumental delivery (15,38%) and two of them after natural vaginal birth (15,38%). Two of them died during the first 24 hours after the hysterectomy.*

Conclusion: *Surgical delivery is associated with a significantly higher rate of postpartum hysterectomy. Reducing caesarean delivery rates, may be the proper approach in reducing serious postpartum maternal complications.*

RIASSUNTO: Isterectomia ostetrica d' emergenza: 10 anni di esperienza in una Maternità Pubblica in Grecia.

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Lo scopo di questo studio retrospettivo e' la valutazione del rischio materno ostetrico che conduce ad isterectomia ostetrica peri-parto (iop-o) in seguito a differenti modi di parto.

Pazienti e metodo: *Abbiamo raccolto i dati dal Registro di Sala Parto della Divisione Ostetrica - Gineclogica dell' Ospedale Generale "Tzaneio" del Pireo (Grecia) per il periodo Gennaio 1994 - Dicembre 2004. Sono state incluse tutte le donne sottoposte ad iop-o.*

Risultati: *Abbiamo trovato 13 donne sottoposte ad iop-o. Di queste, 9 durante taglio cesareo (69,24%), 2 dopo l' applicazione di ventosa (15,38%)ed infine 2 dopo parto naturale (15,38%). Due delle donne sono morte nelle prime ore o giorni dall' intervento.*

Conclusioni: *I tagli cesarei (tc) sono associati a maggior rischio di iop-o. Il miglior modo per ridurre questi interventi demolitivi e la riduzione dei tc*

KEY WORDS: Peripartum hysterectomy - Obstetrical haemorrhage.
Isterectomia peri-parto - Emorragia ostetrica.

Introduction

The first documented hysterectomy on a live patient at the time of delivery was performed in the United States by Horatio Storer in 1866, but the patient died on the third day after surgery (1). Seven years later Eduardo Porro described the first caesarean hysterectomy in which both infant and mother survived (2).

The removal of the uterine corpus (alone or with the cervix) at the time of a caesarean section, or shortly after a vaginal delivery, although is thought to be rare in modern obstetrics, still remains a life-saving procedure when severe obstetrical haemorrhage fails to respond to conservative treatment. A delay in the correction of hypovolaemia, a delay in the diagnosis and treatment of defective coagulation and a delay in the surgical control of bleeding are the avoidable factors in most maternal deaths caused by haemorrhage (3).

The purpose of this study is to review the incidence, risk factors, indications and the outcome of peripartum hysterectomy in our department.

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Material and methods

We conducted a retrospective review of patient's charts, from January 1995 to December 2004. All hysterectomies done at the time of caesarean section, or within 24 hours following delivery (either vaginal or abdominal), were reviewed. All the 13 charts were available to extract information out of the 13 cases operated. Relevant demographic and clinical data (age, parity, type of labor, complications, indication for hysterectomy, complications, blood loss, transfusions) were extracted. Morbidity in terms of operative and postoperative complications, and perinatal outcome were evaluated.

Results

From January 1995 to December 2004 there were 6034 deliveries at the Obstetrics Department of «Tzaneio» General Hospital. There were 1664 cesarean sections, and 317 vacuum extractions, among those deliveries. In this period there were 13 cases of emergency postpartum hysterectomy, for a rate of 0.21%. The average maternal age was 28.54 years (22 to 38), parity was 2.38 (0 to 4) and gestational age was 36.3 (24 to 41) weeks. Peripartum hysterectomy occurred in 5.4/1000 of cesarean deliveries, 6.3/1000 vacuum extractions and 0.49/1000 of the other vaginal deliveries. One case was primipara, with all the others being multiparas. There were 2 total abdominal (TAH) and 11 supracervical hysterectomies (SCH). Two cases, both multiparas had bilateral salpingo -oophorectomy. Three cases received unilateral salpingo-oophorectomy. General anesthesia was given to all patients. There were two maternal deaths.

The most common indication for peripartum hysterectomies was abnormal placentation in five patients (38.46%). Uterine atony not responding to various uterotonic agents was the indication in three patients (23.07%). Uterine rupture was the indication in three patients (23.07%), two of which occurred in patients with a previous classical cesarean section. In one patient (8%) the indication for hysterectomy was abruptio placentae. In one patient (8%) the indication for hysterectomy was extension of the uterine incision into the broad ligament, resulting in uncontrolled retroperitoneal space haematoma.

All the patients required a blood transfusion, with an average blood loss of 2000 ml. The average number of blood products transfused was 8 units (4-17).

There were 13 infants delivered to 13 women, with median birth weight 3,086 g. There was one neonatal death.

In the study population, 69,23% of the patients who had emergency postpartum hysterectomy underwent it at the time of caesarean section. Four of the patients (30.77%) had prior caesarean section.

Discussion

The report reviews our 10 years' experience in emergency peripartum hysterectomies. Our reported incidence for peripartum hysterectomy, is higher than that reported elsewhere, (4, 5) (0.13%-0.15%) but lower than a more recent report (6).

Risk factors for peripartum hysterectomy include current cesarean birth, previous cesarean birth, and abnormal placentation. Uterine atony was thought to be the most common cause of postpartum haemorrhage in the past. Recent studies have indicated that abnormal adherent placentation is replacing uterine atony as the most common indication for emergency peripartum hysterectomy (7), but this remains debatable (8). In our study abnormal placentation was the most common reason, but the number of cases is insufficient to make statistical conclusions. Patients who deliver by caesarean section are at an increased risk for future abdominal deliveries, uterine rupture and abnormal placental implantation. Because of the impact of caesarean delivery on a woman's reproductive future, health care providers should try to reduce the caesarean section rate. Trial of labor after previous caesarean section should be considered, though it is a rare practice in our country.

A subtotal hysterectomy was performed in 84.61% of cases while a total abdominal hysterectomy was performed in the remaining 15.39%. It has been suggested that opinion favours the total hysterectomy where practical, due to the fact that subtotal hysterectomy may not always be sufficient to abate the haemorrhage, and control blood loss. However, considering that subtotal hysterectomy in general is a less time-consuming procedure requiring minimal pelvic dissection and less blood transfusion, it is worthwhile considering this as the preferred procedure.

The mortality rate of the procedure in this study (15,38%) is higher than many reported series in the U.S. and other developed countries. Both cases underwent total abdominal postpartum hysterectomy. In the first case a 36-year old woman with two previous vaginal deliveries, underwent a caesarean section (with general anesthesia) due to fetal distress. Four minutes after the removal of the placenta the patient became cyanotic and hypotensive, and the uterus became atonic. The patient died 90 minutes after the emergency postpartum hysterectomy, and amniotic fluid embolism was suspected, but histopathological findings did

not support the clinical findings. In the second case a 28-year old woman with one previous vaginal delivery, gave birth with vacuum-assisted vaginal delivery. Shortly after (15 minutes) the removal of the placenta the patient became hypotensive and cyanotic, the uterus being atonic without obvious massive haemorrhage. The patient underwent total hysterectomy but the site of the suspected haemorrhage could not be identified. The patient died 3 weeks later in Intensive Care Unit where she was transferred as soon as she became stable after the hysterectomy.

The only fetal demise (neonatal death) occurred in a woman with placental abruption and massive obstetric haemorrhage at the 24th week of gestation. In the same woman subtotal hysterectomy was not enough to control haemorrhage and right internal iliac artery ligation was performed.

In our study only one primipara underwent postpartum hysterectomy, during a caesarean section, due to extension of the uterine incision into the broad ligament, resulting in uncontrolled retroperitoneal space hematoma. There is usually a conflict between the removal of the uterus to save the woman's life and preservation of her future fertility, especially in primigravida. Conservative measures in order to preserve the uterus include vaginal or uterine packing, and the B-Lynch brace suture (9). Such measures though are unlikely to be successful with placenta accreta. Internal iliac arteries ligation is effective, but remains a risky procedure. Selective arterial embolisation is probably the most effective conservative option in the control of pelvic bleeding, preserving the uterus and hence future fertility, whilst reducing patient morbidity and length of hospitalisation by avoiding further surgery Although the availability of interventional radiology facilities slightly increased in our country, remains a very rare option.

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