นวตกรรม

การนำเทคนิค intra-vaginal cuff ร่วมกับ total vaginal packing มาห้ามเลือดหลังผ่าตัด peripartum hysterectomy

ประเด็นปัญหาแนวคิดการพัฒนา

ภาวะ การตกเลือดหลังคลอดที่เกิดขึ้นขณะผ่าตัดคลอดหรือหลังการตัดสินใจเปิดหน้าท้องเพื่อทำการห้ามเลือด บางครั้งมีความรุนแรงจนถึงขั้นแม้ตัดมดลูกไปแล้วเลือดก็ยังไม่หยุด การนำเทคนิค **intra-vaginal cuff ร่วมกับ total vaginal packing** มาใช้ห้ามเลือดพบว่าได้ผลดี ทำไม่ยากและมีภาวะแทรกซ้อนจากการทำหัตถการน้อยกว่า การทำ umbrella packing หรือการทำ bilateral internal iliac artery ligation

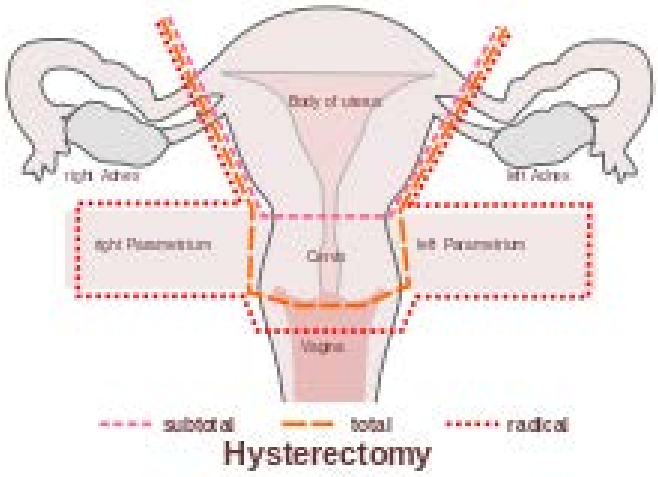
วัตถุประสงค์: ศึกษาการใช้เทคนิค **intra-vaginal cuff ร่วมกับ total vaginal packing** ใช้ห้ามเลือดหลังทำผ่าตัด peripartum hysterectomy

วิธีดำเนินการ:

1.แนะนำให้ทำการผ่าตัด peripartum hysterectomy ในแบบ subtotal และ open stump of cervico-vaginal part ก่อน

2.เตรียมผู้ป่วยนอนผ่าตัดในท่า lithotomy

3. Pack ก๊อสอัดแน่นลงในvaginal cuffแล้วเย็บปิด cuff



4.ให้แพทย์ผู้ช่วยทำ total vaginal packing โดยpack ดันกลับจากทางด้านล่างขึ้นมาก่อนปิดหน้าท้อง

5.สามารถใช้เทคนิค pack to go back ร่วมกับการใส่ Jackson drainเพิ่มในช่องท้อง ถ้ายังควบคุมภาวะเลือดออกได้ไม่มั่นใจพอ

ผลการดำเนินการ: ได้รวบรวมผู้ป่วย 4 รายในสถานการณ์ดังกล่าวข้างต้นพบว่าสามารถใช้วิธีนี้ในการควบคุมภาวะตกเลือดอย่างได้ผล ผู้ป่วยรอดชีวิตและสามารถจำหน่ายออกจากโรงพยาบาลได้ภายใน 7 วัน

Report case 4 ราย (ตั้งแต่ปีงบประมาณ 2561-ปัจจุบัน)

1.Previous cesarean section 33 +4 weeks with complicated placenta previa with severe endometriotic adhesion with uncontrolled bleeding after subtotal cesarean hysterectomy with DIC

(EBL 2500 cc, ให้ PRC 7 units FFP 4 units plateletหาไม่ได้ในขณะนั้น)

2.Previous cesarean section 22 +2 weeks with medical induce abortion due to fetal Down syndrome with severe antepartum hemorrhage and uncontrolled bleeding with DIC after subtotal cesarean hysterectomy

(EBL 3500 cc, ให้ PRC 4 units FFP 4 units plateletหาไม่ได้ในขณะนั้น)

3.Severe hemorrhage after manual removal of placenta due to retained placenta after vaginal birth with uncontrolled bleeding after subtotal cesarean hysterectomy with DIC

4.Internal hemorrhage after cesarean hysterectomy with heavy blood loss ,reexplore with stop bleeding, with DIC due to heavy blood loss (โดยในcaseนี้ได้ทำ intra- abdominal packing ร่วมด้วย และนำผู้ป่วยมา reexploreเพื่อเอา swab ในช่องท้องออกใน 24 ชั่วโมงต่อมา)

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OBSTETRICS

3-Tourniquets Utero-ovarian Vessels Ligation Technique for Subtotal Cesarean Hysterectomy at Uthaithanee Hospital

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ABSTRACT

Objective: To compare the 3-tourniquets utero-ovarian vessels ligation technique in subtotal cesarean hysterectomy with standard method.

Materials and methods: Nine women were performed subtotal cesarean hysterectomy with the 3-tourniquets utero-ovarian vessels ligation technique at Uthaithanee Hospital from March 1, 2011 to January 16, 2012. The control cases were those with standard method before introducing this new technique. Percentage of blood transfusion and mean estimated blood loss were compared between groups.

Results: Subtotal cesarean hysterectomy with the 3-tourniquets utero-ovarian vessels ligation technique has better results in reduction of blood loss during operation. This new technique required blood transfusion in 22.2% with mean estimated blood loss of 844 cc. For standard technique, the blood transfusion rate was 76.9% and mean estimated blood loss was 1,565 cc.

Conclusion: The 3-tourniquets utero-ovarian vessels ligation technique for subtotal cesarean hysterectomy can temporally stop bleeding from gravid uterus during operation. It significantly reduced blood loss as well as blood transfusion comparing with standard method.

Keywords: Subtotal cesarean hysterectomy, the 3-tourniquets utero-ovarian vessels ligation technique, postpartum hemorrhage

Introduction

The major complications of cesarean hysterectomy are excess blood loss and urinary tract damage during operation. Many studies from 1998 to 2007 reported blood transfusion rate at 83% in emergency and 24 % in elective cases[1]. Two studies in 2010 demonstrated 44% of blood transfusion in the first emergency postpartum hysterectomy and 4.79 (1-14) units of blood were used per case in the other study[3]. This condition need to be managed quickly which can result in excessive blood loss and serious complications. Blood transfusion and blood components replacement may also be necessary. This 3-tourniquets utero-ovarian vessels ligation technique during subtotal cesarean hysterectomy is performed by temporary occlude both ovarian and uterine vessels with

Fig. 1.1 The 2 upper position that should be applied tourniquets in the first (white arrow).

Fig. 1.2 Lower lip of uterine wound should be pulled up or suture quickly before apply lower tourniquet (white arrow).

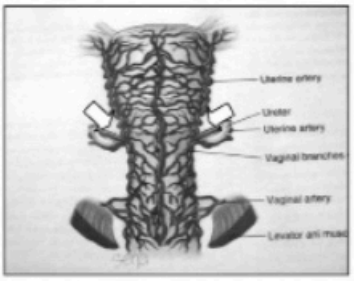

Fig. 1.3 Uterine insertion of utero-sacral ligament is the position thal uterine arteries enter to uterus (2 white arrows).

Fig. 1.4 After already applied 3 tourniquets, uterine bleeding was stopped almost completely.

Fig. 1. Method to apply 3 tourniquets utero-ovarian vessels ligation

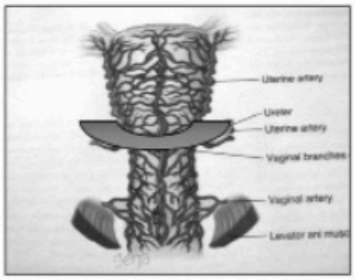

Fig. 2. Ligation of bilateral uterine vessels with the 3 tourniquets technique

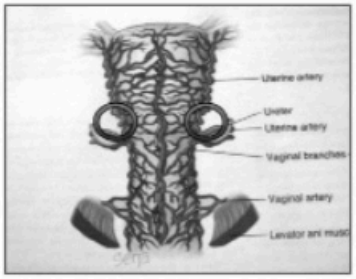

Fig. 3. Bilateral uterine vessels ligation in standard method

Pregnant uterus composes of numerous highly vascular area. Ligation of lower uterine segment of uterus with lower tourniquet can reduce blood loss comparing with bilateral uterine vessels ligation in standard method (Fig. 2 and 3).

Severe laceration of lower uterine segment due to delivery of the baby during cesarean section may cause failure of this new technique because vessels in severe uterine laceration of uterine lower segment opening in many points will cause difficulty to apply lower tourniquet. If the patient has complete family and has high chance for cesarean hysterectomy, to avoid severe laceration of uterine lower segment, classical cesarean section is more preferable.

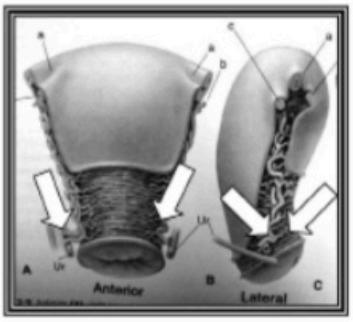

Fig. 4. Position of the lower portion of uterus that both uterine arteries enter to (white arrow), so the lower tourniquet should apply to reach to this level (insertion of utero-sacral ligament) or lower than.

Adequate bladder dissection to separate it from anterior uterine lower segment before lower tourniquet application is very important, because this procedure can prevent injury to both ureters by pushing them down together with bladder, and make ease to apply lower tourniquet to reach effective level (Fig. 4.)[6].

Results

Table 1. Comparison of the characteristics of subtotal cesarean hysterectomy in 2 groups

Characteristics	Group 1 (3 tourniquets utero-ovarian vessels ligation technique) (n=9)		Group 2 (standard method) (n=26)		p
	Emergency (n=7)	Elective (n=2)	Emergency (n=25)	Elective (n=1)	
Age (years)	35.56±3.62		31.77±5.97		0.042
Gravidity	2.56±0.50		2.58±0.69		0.925
Gestational age (weeks)	38.33±1.89		38.88±1.50		0.466
Indications					0.217