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A case report of modified Porro caesarean hysterectomy on mother with hemorrhagic shock and severe anemia due to placental abruption

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ABSTRACT

BACKGROUND: Modified Porro caesarean hysterectomy is an operation technique that is used in management of emergency obstetric complication in the presence of life threatening hemorrhage. This technique was developed by Eduardo Porro in 1876 consisting of uterine corpus amputation after caesarean section and suturing of the cervical stump into the abdominal wall incision.

CASE: A G6P4, 44-year-old woman with 30–31 weeks of gestation referred presented with heavy vaginal bleeding since 8 h. She was unconscious, her vital sign: Blood Pressure 90/70mmhg. Obstetric examination revealed fundal height corresponding to 26 weeks gestation, single fetus with transverse lie with hand presentation, fetal heart didn't found. Per vaginal examination showed cervical dilation of 4 cm, ongoing heavy bleeding from canalis cervicalis. Arm was felt on vaginal toucher. Her hemoglobin was 6.3g/dL. Emergency caesarean section was planned. After the peritoneum was opened, hematoma in the uterus was found and the blood pressure dropped to 60/30 the team was decided to perform modified Porro caesarean hysterectomy, hysterectomy was performed without delivering the baby. Patient was hospitalized for 4 days before discharged.

CONCLUSION: The primary concern of modified Porro cesarean hysterectomy is to save the mother by shorten the operation and stop the bleeding quickly.

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1. Introduction

Emergency caesarean hysterectomy is a surgical procedure usually performed as a life-saving to control massive haemorrhage, before or after delivery or intraoperative. It includes both caesarean hysterectomies that are performed by caesarean delivery and postpartum hysterectomy performed by vaginal delivery. In many cases the incidence of emergency caesarean hysterectomy is because of the rise of caesarean delivery rate in recent years and the increasing population scarred uterus may indirectly increase the incidence of emergency postpartum hysterectomy [1].

Modified Porro caesarean hysterectomy was developed by Eduardo Porro in 1876 consisting of uterine corpus amputation after caesarean section and suturing of the cervical stump into the abdominal wall incision in an attempt to prevent life-threatening. Placental Abruption happen when placenta separates from uterus before childbirth that usually come with symptoms such as vaginal bleeding, abdominal pain and hemorrhagic shock due to heavy bleeding [2].

Emergency caesarean hysterectomy is the most dramatic operation in modern obstetrics and is generally performed when all conservative measures have failed to achieve haemostasis in the setting of life threatening hemorrhage. The unplanned nature of the surgery and the need for performing it expeditiously, compound matters. Moreover the acute loss of blood renders the patient in a less than ideal condition to undergo emergency surgical intervention. However recognizing and assessing patients at risk and appropriate and timely intervention would go a long way in ensuring a better outcome in this otherwise difficult situation [3].

During 25 year, the rate of peripartum hysterectomy was 1.7 per 1000 births in Parkland hospital. Most of this rise is attributed to increasing rates of caesarean delivery and its associated complications in subsequent pregnancy. The incidence of emergency postpartum hysterectomy in developing countries ranged from 0.2 per 1000 to 5 per 1000. Rossi et al. found 1000 cases that the major factors leading to emergency postpartum hysterectomy are life saving based on clinical judgment that a delayed hysterectomy would have threatened the patient's life such as, abnormal placental adhesion (38%), uterine atony (29%), uterine rupture (12%), and abruptio placenta (2%). Maternal morbidity accounted for 549 (55.9%) of 981 cases, of which 30 (5.4%) were unspecified [4].

Technique used in emergency caesarean hysterectomy can be done by either total abdominal hysterectomy or subtotal hysterectomy.

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tomy. But the incidence of subtotal hysterectomy is increased to save time and avoid haemorrhage. Subtotal hysterectomy may lead to complete removal of symptoms while bladder and sexual functions may be less affected compared to total abdominal hysterectomy [5].

Placental abruption clinical criteria of severity rely exclusively on fetal (fetal distress or fetal death) and maternal complications without consideration of neonatal or preterm delivery-related complications. However, two-thirds of abruption cases are accompanied by fetal or neonatal complications, which includes preterm delivery. A clinically meaningful classification for abruption therefore should include not only maternal complications but also adverse fetal and neonatal outcomes that include intrauterine growth restriction and preterm delivery [6].

The criteria that were needed to define placental abruption as “severe” should be clinically meaningful and should include at least 1 of maternal (disseminated intravascular coagulation, hypovolemic shock, blood transfusion, hysterectomy, renal failure, in-hospital death), fetal (nonreassuring fetal status, intrauterine growth restriction, or fetal death), or neonatal (neonatal death, preterm delivery, or small for gestational age) complications. The intrinsic motivation for this hypothesis was that abruption cases with 1 of the aforementioned criteria will identify a distinct subset of women with very high risks of serious maternal complications [7].

2. Case

A G6P4, 44-year-old woman with 30–31 weeks of gestation referred by a midwife presented with heavy vaginal bleeding in the past 8 h and severe abdominal pain for 6 h before reported to the hospital.

Physical Exam (Primary Survey):

Consciousness: Sopor (GCS score = 6)

Bodyweight before pregnant 50 kg, current bodyweight 63 kg, Height 152 cm, BMI 216

Haemodynamic state: BP 90/70 mmHg, HR 140 bpm, RR 28 bpm, Temp 36.9 °C

General state: eye: anemic

Obstetrical State: Fundal height 24 cm, back at the upper side, transverse lie position, with head at the left side. Contractions 3 × 30/40”, FHR didn’t found, EFW hard to determined.

I: vulva/uretra within normal limit

Vt: thin portio, dilatation 4 cm, amniotic membrane (-), on going heavy bleeding from OUE estimated 1500 cc, umbilical cord and arm were felt when doing the vaginal toucher in station 0.

Laboratory Findings: CBC 6,3/24,7/12.300/338.000 RBG 113 CT/BT : 8’/4’

Ultrasound Exam: didn’t performed

Obstetric history: G₆ P₄ A₁, 2 live children

- 2009, **abortion**, curettage (+), hospital
- 2010, baby boy, 2700 g, spontaneous delivery by midwife
- 2012, baby girl, 2400 g, spontaneous delivery by midwife
- 2014, baby girl, 2600 g, spontaneous delivery by midwife
- 2017, baby boy, 2900 g, spontaneous delivery by midwife
- This Pregnancy

Plan: Emergency caesarean section

Interooperative: After the peritoneum was opened, hematoma in the uterus was found and the blood pressure dropped to 60/30 and Pulse was found 140 via monitor, because there is no blood stock in the hospital the team was decided to perform modified Porro caesarean hysterectomy, hysterectomy was performed without delivery the baby to save the mother and to make the operation



Picture 1. Uterus with death fetal inside after modified porro caesarean hysterectomy performed. Post Operative.

faster to keep the blood loss to a minimum. After make sure there is no bleeding, abdomen was closed layer by layer (Picture 1).

The patient was admitted to intensive care unit, she got blood transfusion after 24 h post operation and was discharged from hospital after 6 days with hemoglobin 10.7 g/dl.

3. Discussion

Porro advocated hysterectomy during a Caesarean to control uterine haemorrhage and prevent peritonitis. His procedure contributed to improved outcome for mother and child. Prior to Porro, the mortality for both patients was virtually 100% [8]. Modified porro caesarean hysterectomy is a fairly dangerous procedure that the decisions must be carefully considered. Nowadays almost no obstetrician is doing this technique with the baby still inside the womb. However, in threaten conditions of life of the mother and where the baby has died, it is necessary to make a quick decision for the operator to decide on the action to be taken considering the limited availability of blood and medical equipment.

Modified porro caesarean hysterectomy technique itself is unfamiliar to use, now to do this technique requires the availability of supporting equipment and skills from the operator to ensure that the patient is safe. This technique is not to be used in every emergency situation, but if there is a limited of blood can be used for transfusion in emergency situation, and if the patient’s life is threatened and the baby in the womb cannot be helped. in hospitals that have limited resources, modified porro caesarean hysterectomy technique can be considered.

4. Conclusion

The primary concern of modified Porro cesarean hysterectomy is done primarily to save the mother. Since the fetus was no longer live, but the mother still had heavy bleeding and in state of hemorrhagic shock. Modified Porro caesarean hysterectomy was performed to shorten the operation and to stop the bleeding quickly. Obstetrician especially who work at district hospital should know about this technique, to save mother when massive hemorrhage happens and blood is not available yet.

Declaration of Competing Interest

The authors report no declarations of interest.

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Ethical approval

No ethical approval was obtained.

Consent

Informed consent was obtained participant included in the study.

Authors contribution

Dr. dr. Bobby Indra Utama SpOG(K) – Main Author.
dr. Rengga Pradipta – Co-author (Writing the paper).

Registration of research studies

This study is not “First-man” study.

Guarantor

There is no guarantor on this study.

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