ORIGINAL ARTICLE J Pub Health Med Res 2015;3(2):38-39

Role of Internal Iliac artery ligation in control of postpartum hemorrhage

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Abstract :

Introduction : Hemorrhage remains a cause of significant maternal morbidity & mortality. Postpartum hemorrhage is the most common cause & is usually due to uterine atony. Management remains a major challenge in obstetrics & gynecology. Internal iliac artery ligation is one of the lifesaving procedure in such conditions.

Methodology : The purpose of this observational study is to review efficacy of BIL in women with intractable hemorrhage for obstetrical and gynecological indications.

Key words : Postpartum hemorrhage, internal iliac artery, maternal mortality, Peripartum Hysterectomy

Introduction :

Hypogastric artery ligation was pioneered by Howard Kelly for the treatment of intraoperative bleeding from cervical cancer in 1893 prior to its application in postpartum hemorrhage (PPH).[1]The procedure was later introduced by Mangert W F et al in 1969 & extensively investigated by Burchell RC in 1968 [1,2,3]

Many studies have been reported since then to show that hypogastric artery ligation can be life-saving in patients with massive pelvic bleeding.[2,3]

Apart from controlling hemorrhage IIAL conserves fertility, one of the important indications of the operation. Other advantages of this operative procedure include, it requires less operative time in experienced hands & is associated with less postoperative morbidity than the other alternative option i.e., hysterectomy [4]

Methodology :

- This is an observational analysis study which included all cases of pelvic hemorrhage treated during the period from Jan 2013 to Dec 2014, for 2 years in the district tertiary hospital attached to the department of obstetrics & gynecology, JJM medical college, Davangere, India. It is the main tertiary referral Centre dealing with many complicated & high risk obstetrical cases.Gynec cases were also included.
- Study comprised of analysis of 48 cases of internal iliac artery ligation performed by the author & by senior obstetricians over a period of 2 years. Data analysis was done in relation to indications & complications related to the surgical procedure

Results :

In our Observational study, there were 48 cases of total **31850** deliveries. 46 were obstetric cases & 2 post hysterectomy cases. Out of 46, only 7 were primigravida & rest of them (39) were multigravida & 8 were parous women who had atonic PPH.

- There were 39 preterm babies & 18 term babies with 14 IUDs.
- 16 were cases with caesarean in previous pregnancies.
- 20 cases underwent repeat lscs for obstetric indication, 8 women had FTVD & 4 cases went for VBAC.For 10 cases subtotal
- Peripartum hysterectomy was done, 17 cases underwent internal iliac artery ligation & 29 cases total Peripartum hysterectomy.
- Two cases of non-descent vaginal hysterectomy had primary hemorrhage & internal iliac artery ligation was done.
- Of 48 cases, 24 cases were on ventilators postoperatively for 1-3 days & then were discharged. There were 3 maternal deaths
- Maternal mortality = 3,cause of death being,

1. G2A1-PROM with prolonged 2nd stage of labor - LSCS was done for atonic PPH-SPPH. Cause of death being ,septicemia
2. Twins with severe PE with pulmonary edema
3. Atonic & traumatic PPH with hypovolemic shock

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Discussion : Internal iliac artery ligation is an emergency lifesaving procedure and also a fertility preserving method. It possess high efficacy for the management of postpartum hemorrhage. The procedure is very much helpful in developing countries like India where the number of deliveries are high & hemorrhage being the leading cause of maternal mortality. Although effective, the procedure is not commonly performed by obstetricians & gynecologists.

- In deciding to perform IIA ligation, the clinician must consider also whether the patient's condition will allow time for her to undergo this conservative procedure at the expense of a delay in definitive treatment[6]
- However if the surgeon is not well versed with the procedure, Peripartum hysterectomy is the next best option to save the life of the women in shock due to obstetric condition where in most of the hospital embolization facility is not available

Conclusion :

Each year thousands of women die from PPH around the world. The prevention and management of PPH are therefore very important aspects of maternity care. Clinicians should identify risk factors, take steps to prevent PPH and learn and employ as many of the management techniques[(5)]

Internal iliac artery ligation is more conservative than obstetric hysterectomy which is advantage in young women with intractable pelvic hemorrhage involving lesser morbidity & giving chance to future fertility. Hence it is important for every pelvic surgeon to learn this life saving procedure

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How to Cite this article :
I S Sapna, Shanthi Priya , Role of Internal Iliac artery ligation in control of postpartum hemorrhage
J Pub Health Med Res, 2015;3(2):38-9.

Funding: Declared none
Conflict of interest: Declared none