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Original Research Article

Internal Iliac Artery Ligation: A Modality for Control of Severe PPH in a Tertiary Care Centre

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Abstract:

Background: PPH is defined as any amount of blood loss from or into genital tract after delivery of baby which alters hemodynamic stability of women. Classically defined as >500ml of blood loss after vaginal delivery & >1000ml blood loss after C-section

Aims and Objective: To study the efficacy of internal iliac artery ligation performed for severe PPH (primary and secondary). The ultimate aim is to save the life of mother and decrease maternal mortality and morbidity.

Materials and Methods: It is a retrospective study at a tertiary care center in Patna, Bihar. The durationof study was one year (from May 2022 to April 2023). Eleven patients who underwent internal iliac arteryligation to control PPH were included in the study. Internal iliac artery ligation was performed as a surgical intervention to control postpartum hemorrhage.

Results: Out of eleven patients seven had primary PPH. out of 7 cases of Primary PPH, five responded successfully to internal iliac artery ligation and in 2 cases hysterectomy was done as bleeding could not be controlled. Two patients presented with secondary PPH (had history of morbidly adherent placenta),responded successfully after internal iliac artery ligation. Two patients who had bleeding even after postpartum hysterectomy, responded successfully after this surgical approach.

Conclusion: Internal iliac artery ligation is an effective method in experienced hands for the managementof life-threatening obstetrical bleeding.

Keywords: PPH-Postpartum hemorrhage, LSCS- Lower segment caesarean section.

Introduction

PPH is defined as any amount of blood loss from or into genital tract after delivery of baby which alters hemodynamic stability of women. Classically defined as >500ml of blood loss after vaginal delivery & >1000ml blood loss after c-section.it may be of mild, moderate, severe degree. Mild-blood loss 1000- 1500ml, moderate-1000-2000ml, severe->2000ml. Various modalities can be used for management of PPH, like use of uterotonics, balloon tamponade, compression sutures, systemic pelvic devascularization and at last peripartum hysterectomy. Internal iliac artery ligation is a modality which is used for control of severe PPH. It is an effective fertility preserving and sometimes the only available lifesaving procedure for combating postpartum hemorrhage.

Inclusion Criteria: All patients in whom severe PPH had occurred and did not respond to uterotonics and other means.

Exclusion Criteria: Patient who responded to uterotonics and other means and bleeding could be controlled.

Materials and Methods

Type of Study: Retrospective observational study.

Duration of study was one year from May 2022 to April 2023 at a tertiary care center (Nalanda Medical College & Hospital, Patna). In total 11 patients, bilateral internal iliac artery ligation was done for controlling severe post-partum hemorrhage.

Three patients out of 11 were delivered in our center. In 2 cases PPH occurred after vaginal delivery and in one after LSCS. Seven cases were referred from some periphery and other centers. All cases were managed by multidisciplinary approach like senior obstetrician, senior anesthetists, trained staff and nurses.

Results

Out of 11 patients, seven had primary PPH, out of

these seven cases of primary PPH, 5 responded successfully and in 2 hysterectomy was done as bleeding could not be controlled. Two patients presented with secondary PPH (had history of placenta accreta spectrum), responded successfully after internal iliac artery ligation. Two [2] patients who had bleeding even after postpartum hysterectomy, responded successfully after this surgical approach. Table -1 shows the result of internal iliac ligation:

Table 1:

	Number	Response to internal iliac artery ligation	
		Yes	No
Primary PPH	7	5	2
Secondary PPH	2	2	0
Post hysterectomy	2	2	0
Total	11	9	2

Discussion

In my study, efficacy of internal iliac artery ligation performed with the indication of severe obstetrical bleeding was detected to be about 81.8% (9 cases). Only in 18.18% (2 cases), after bilateral internal iliac artery ligation, hysterectomy was performed, as bleeding could not be controlled. Internal iliac artery ligation may be an effective and safe treatment option to treat PPH. This may also be useful to arrest hemorrhage after hysterectomy. Internal iliac artery ligation may be an effective and safe treatment option to treat PPH. This may also be useful to arrest hemorrhage after hysterectomy. Controlling postpartum hemorrhage by internal iliac artery ligation is not only life saving for the mother but preserves fertility by preventing hysterectomy.

Conclusion

Internal iliac artery ligation is an effective method in experienced hands for the management of life-threatening obstetrical bleeding. It is very useful to control life threatening intractable bleedings, especially in young women whose family is not complete. It is not costly and does not require complex equipment. An experienced surgeon can efficiency perform this procedure. This procedure not only savesthe life of mother but also preserves fertility.

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