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CASE REPORT

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Bilateral vaginal ligation of descending branch of the uterine artery in the management of heavy genital tract bleeding

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Introduction

Intractable genital tract bleeding sometimes occurs at the time of voluntary termination of pregnancy (MTP), and in case of placenta previa, cervical tear, cervical pregnancy, and lower segment cesarean section (LSCS). In such situations, bilateral ligation of descending branches of the uterine arteries can be attempted before proceeding to internal iliac artery ligation or abdominal hysterectomy [1]. In this procedure, the cervix is grasped with a vulsellum or a shape holder and pulled firmly towards the introitus and a chromic catgut No. 1 suture is placed at 3 and 9 o'clock positions on the cervix just below the cervico-vaginal junction.

Case reports

Case No. 1

MTP by suction evacuation was done in a 32 year old, 6th gravida P_3+2, at 8 weeks pregnancy in 1993. After the evacuation of the products of conception, there was continuous bright red bleeding. Carboprost tromethamine was given intramuscularly. Cervical tear and uterine perforation were ruled out. The uterus was well contracted. Intrauterine packing could not control the bleeding. Descending branches of the uterine arteries at 3 and 9 o'clock positions at cervico-vaginal junction were ligated by pulling down the cervix with sponge holding forceps and using chromic catgut No.1. The bleeding was reduced significantly.

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Case No. 2

A 34 year old 6th gravida P_3+2, at 38 weeks of gestation with major degree placenta previa was delivered by LSCS in 1996. Uterus was well contracted and there was no extension of the uterine wound. It was closed in layers. But, there was continuous bright red vaginal bleeding . Three units of blood were transfused. Intra-uterine packing was not effective. Descending branches of the uterine arteries at 3 and 9 o'clock position at cervico-vaginal junction were ligated by pulling down the cervix with sponge holding forceps and using chromic catgut No.1. The bleeding was controlled satisfactorily.

Case No. 3

Mrs. CD 38 years, P_3+2, 5th gravida at 37 weeks of gestation with major degree of placenta previa had a LSCS done in 2002 after a heavy bout of vaginal bleeding. After LSCS the uterus was well contracted and there was no extension of the uterine wound. The abdominal wound was closed in layers. At the time of vaginal toilet, there was seen a blood clot with continuous fresh vaginal bleeding. The abdomen was reopened and sub-total abdominal hysterectomy was performed. But the vaginal bleeding did not cease. As a last measure, descending branches of the uterine arteries were ligated at 3 and 9 o'clock position by gently pulling down the cervix towards the introitus. The bleeding was significantly reduced.

Discussion

Pregnancy related intractable genital bleeding is a threat to a pregnant woman. For control of post-partum hemorrhage prostaglandin, ergometrine, and uterine packing are sometimes not effective enough. Hence one resorts to cesarean hysterectomy or internal iliac artery ligation.

Postabortal genital bleeding also sometimes fails to respond to medical treatment and uterine packing necessitating surgical intervention. Ligation of ascending branches of uterine arteries for control of postpartum or post-cesarean section hemorrhage has been described in a number of reports as almost universally successful. Ligation of these vessels for first trimester postabortal hemorrhage has been advocated [2]. But this procedure requires laparotomy.

In a case of profuse vaginal bleeding following vacuum suction termination, the bleeding was controlled only by vaginally ligating an aberrant cervical artery [1]. The nonpregnant cervix comprises 15% of smooth muscle fibres and the remainder consists of fibrous connective tissue. It is also true that lower uterine segment is a passive segment where the sinuses remain open after delivery in placenta previa leading to heavy postpartum hemorrhage. In order to save the life, abdominal hysterectomy is commonly performed. Conservative managements like packing of the uterus and the cervical canal, suturing of the cervical canal, suturing of the cervical arteries, amputation of the cervix, and ligation of internal iliac arteries have all been advocated [3,4].

Ligation of descending branches of uterine arteries vaginally has been advocated by Ross [5] to control postpartum hemorrhage not responding to conventional conservative methods. This procedure can prevent an unnecessary hysterectomy with its consequent physical and mental trauma. There is the added advantage of shorter stay in the hospital. In our cases too, we controlled the genital bleeding by ligating descending branches of uterine arteries vaginally when ergometrine, carboprost tromethamine and uterine packing could not control the bleeding. This method is simple and effective, and can be attempted before undertaking hysterectomy or internal iliac artery ligation to control intractable genital bleeding.

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