Postpartum Hemorrhage Emergency Procedures

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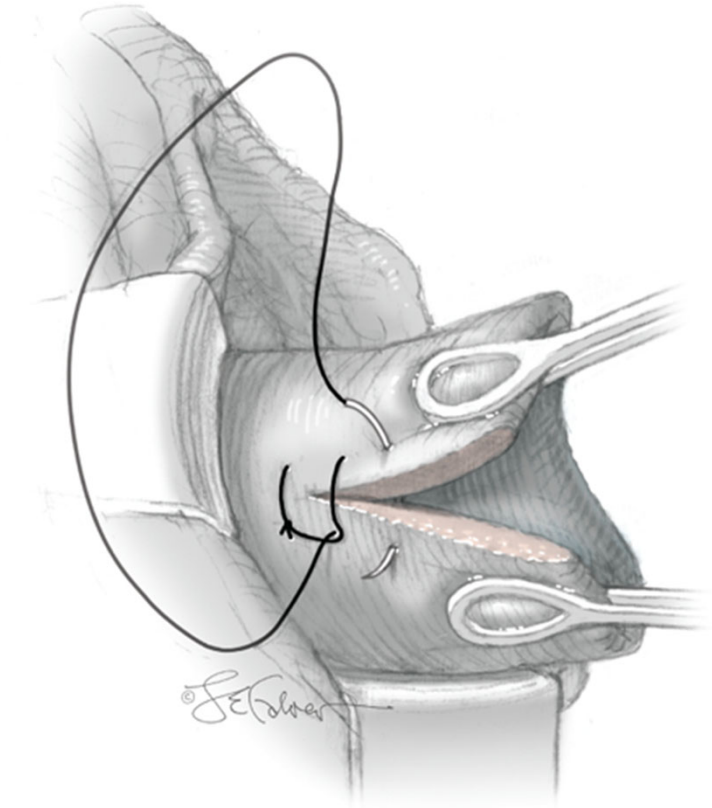
Running Cervix / Cervical Laceration Repair



Indications:

- Profuse arterial hemorrhage during and after the third-stage of labor, particularly in the uterus is firmly contracted

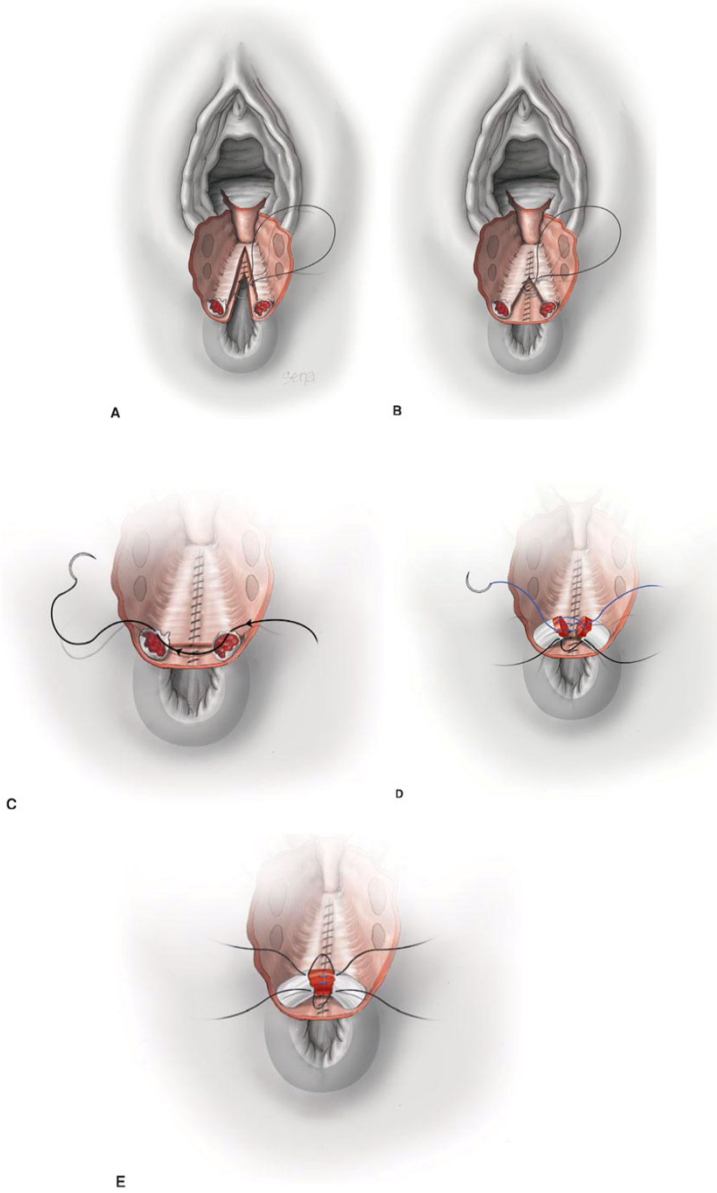
Materials:

- Ringed forceps x 2
- Vaginal side wall retractors x 2
- 2-0 Vicryl suture (if cervical laceration repair is necessary

Steps:

1. Have one assistant push the uterine fundus down towards the pelvis, while another assistant uses two vaginal side wall retractors to expose the cervix
2. Take the two ringed forceps, one in each hand, and "walk" the cervix, starting at 12 o'clock and moving circumferentially until the entire cervix has been visually inspected
3. If a deep laceration is identified, start repair from behind the laceration apex. Continue a running lock suture until the laceration is repaired

Repair of 4th Degree Laceration



Indications:

- Fourth degree perineal laceration (laceration through rectal mucosa)

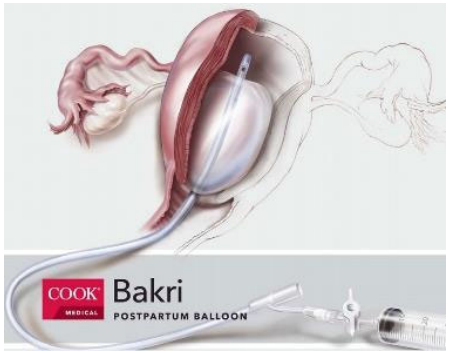
Materials:

- 3-0 vicryl suture on CT-1 needle, 2-0 vicryl suture on CT-1 needle

Steps:

1. Reapproximate rectal mucosa with 3-0 vicryl suture in a continuous non-locking suture line
2. Reapproximate internal anal sphincter with 3-0 vicryl suture in a continuous, non-locking suture line
3. Repair the external anal sphincter with 2-0 vicryl suture in the P-I-S-A fashion: place a single stich posteriorly, then inferiorly, followed by a figure of eight suture through the middle of the muscles, then concluding with additional single stitches superiorly and anteriorly
4. Repair the remainder of the laceration as you would repair a second degree laceration
5. Give 2 g Ancef for prophylaxis

Bakri Balloon Placement

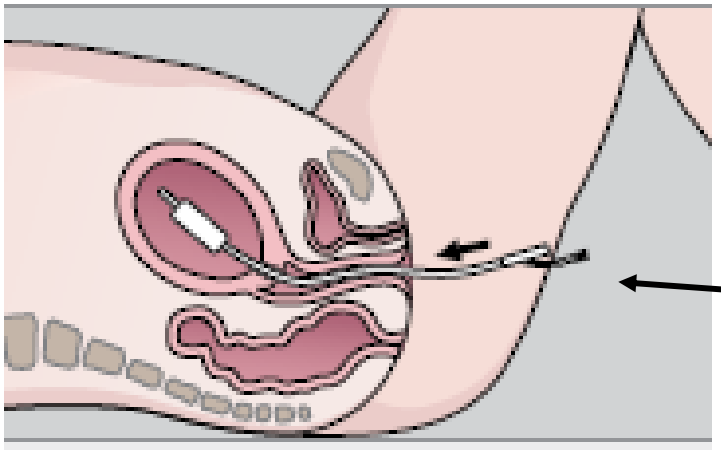


Indications:

- To control postpartum hemorrhage from uterine atony vs. primary intra-uterine source such as placental bed bleeding

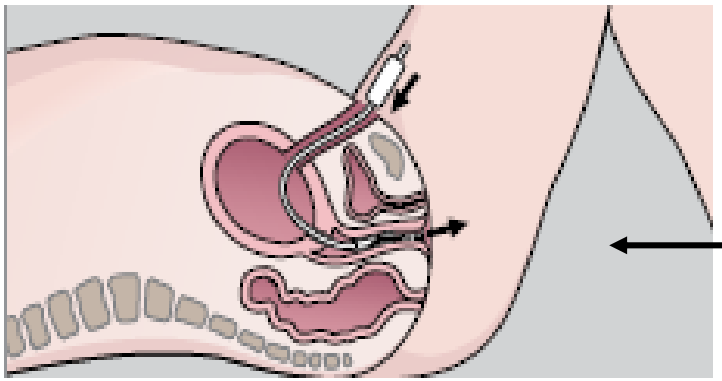
Materials:

- 0-Vicryl suture on CT-1 needle
- Malleable retractor



Vaginal

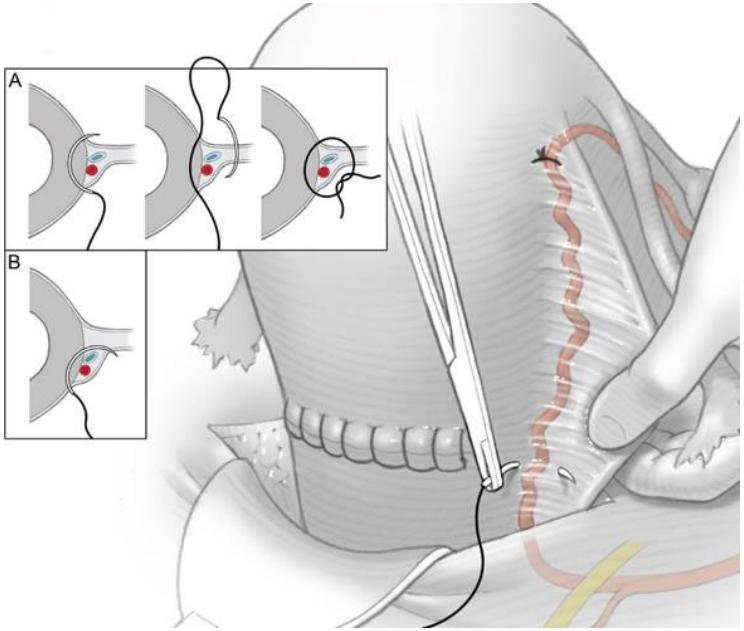
1. Insert balloon into uterus, insuring entire balloon is past the internal cervical os. Can perform under ultrasound guidance
2. Fill balloon with 300-500 cc of normal saline
3. Connect drainage port to a foley catheter leg bag (or similar fluid collection bag

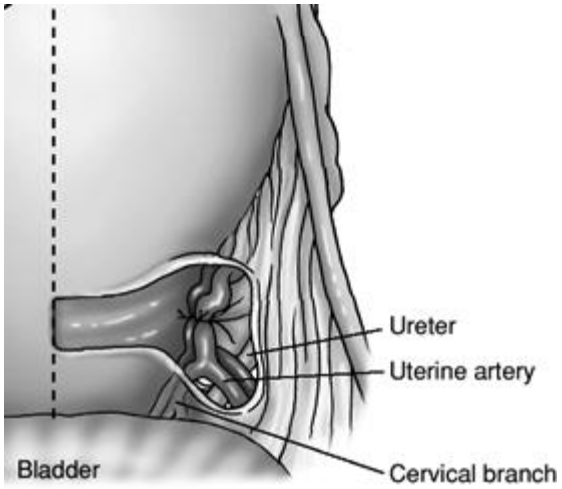


Abdominal

1. Pass bakri tubing (connectors) through hysterotomy and out of the cervix and vagina to an assistant
2. Pull balloon shaft through vagina until the base of the balloon is just above internal cervical os
3. Close hysterotomy, being cautious not to puncture the balloon
4. Fill balloon with 300-500 cc of normal saline
5. Connect drainage port to a foley catheter leg bag (or similar fluid collection bag)

"O'Leary" Uterine Artery Ligation





Indications:

- Postpartum hemorrhage typically originating from lacerations, extensions, or placental implantation site
- To decrease pulse pressure to reduce hemorrhage, apply ligation bilaterally

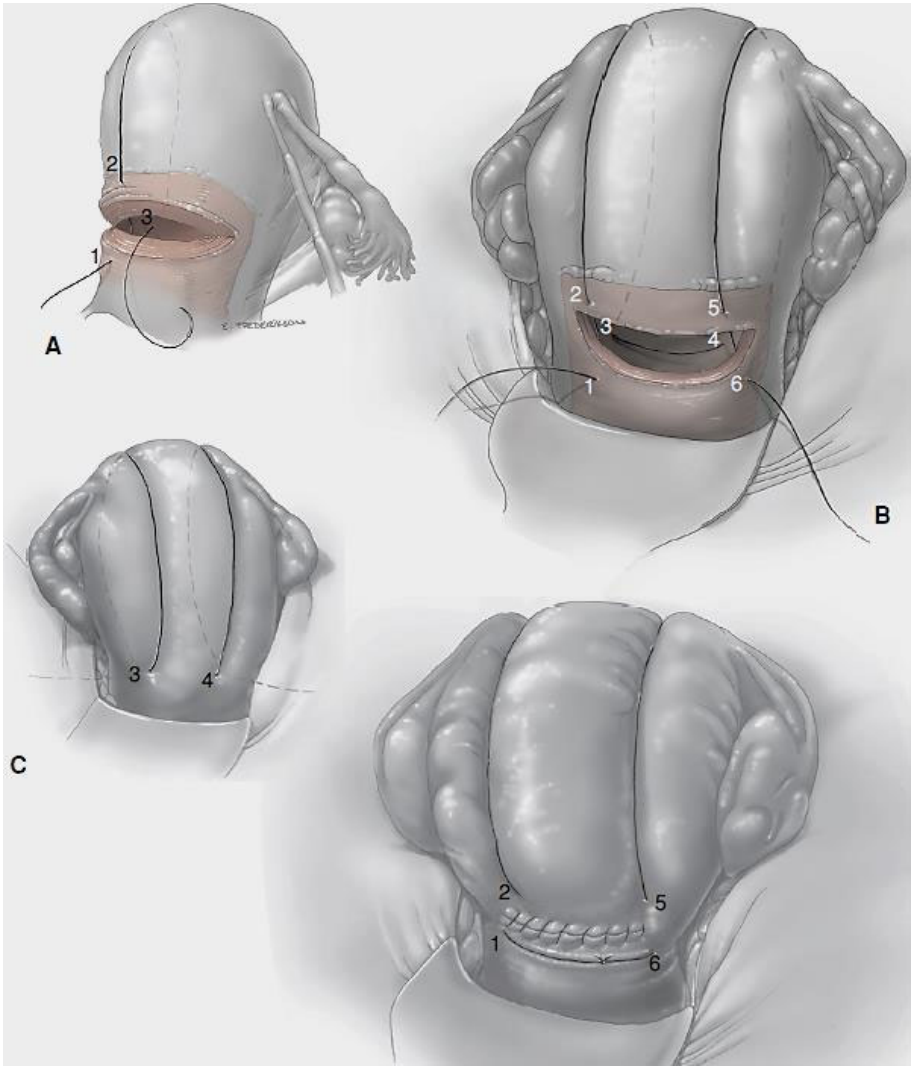
Materials:

- 0-Vicryl suture on CT-1 needle
- Malleable retractor

Steps:

1. Elevate uterus and identify the ascending branch of the uterine artery within the broad ligament
2. Insert needle perpendicularly from anterior to posterior into broad ligament/lateral uterus medial to uterine vessel at the level of the lower uterine segment (either inferior to laceration/extension vs. just below level of hysterotomy) – IMAGE A
3. Remove needle from posterior aspect of uterus/broad ligament, and re-insert from posterior to anterior within the broad ligament lateral to the uterine artery
4. **Modification**: Isolate the uterine vessels within the broad ligament and pass needle underneath uterine vessels within the broad ligament from medial to lateral

"B-Lynch" Compression Suture



Indications:

- Postpartum hemorrhage from uterine atony
- Method to compress uterus to decrease bleeding

Materials:

- #1 Chromic on CTX needle

Steps:

1. Start below closed low transverse hysterotomy incision
2. Insert needle vertically starting below low transverse hysterotomy, exiting above hysterotomy
3. Loop suture up and over uterine fundus to the posterior uterus
4. Insert needle horizontally from the ipsilateral side of the uterus to the contralateral side (Image C)
5. Suture exits on posterior side of uterus and then loops back up and over uterine fundus to the anterior side
6. Insert needle vertically above hysterotomy and travel inferior to hysterotomy, removing the needle
7. Tie two ends of the suture (Image D, points 1 to 6)

Emergency Procedures, Johns Hopkins Hospital L&D Hemorrhage Bundle