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REVIEW ARTICLE ON MAJOR CONCERN OF WOMEN ON POST OPERATIVE CARE AFTER CESAREAN DELIVERY

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INTRODUCTION

Cesarean section (CS) is most common obstetric surgery performed worldwide to save life of pregnant patient as well as fetus with a continuously increasing incidence for the last two decades giving the women, an obstetrical status of "previous cesarean section". However, CS are associated with increased risk of maternal and perinatal morbidity and mortality. It is associated with PPH, sepsis, peripartum hysterectomy in present pregnancy and adherent placenta, uterine rupture and death in future pregnancies.[1]

Cesarean deliveries have risen significantly over the past decades due to advanced maternal age, defensive obstetric practice, medico legal concerns and maternal request.

Due to the overall rise in cesarean frequency in developing countries, an increasing number of women have had multiple repeat caesarean sections (MRCS0. Trial of labor after CS is an alternative to decrease CS rates. However, vaginal birth after CS is not being routinely performed in all hospitals of our country.[2]

HISTORY OF CESAREAN DELIVERY

- There is evidence from both early Western and non-Western societies • the term "cesarean" has been debated over time.
- Originally believed to have been derived from the birth of Julius Caesar,
- It is unlikely that his mother, Aurelia, would have survived the operation.
- Her knowledge of her son's invasion of Europe many years later indicates that she survived childbirth
- Roman law under Caesar specified surgical removal of the fetus before burial of deceased pregnant women.
- Religious edicts required separate burial for the infant and mother.
- Thus, the term cesarean more likely refers to – being cut open as the Latin verb "caedare" means to cut.
- Cesarean operation was the preferred term before the 1598 publication of Guillimeau, – introduced the term "section.
- New methods for anesthesia = C/S for obstructed labor gained popularity over destructive procedures • But mortality rates remained very high, – sepsis and peritonitis
- Surgeons complete the operation without closing the uterus – hemorrhage, sepsis
- 1876, Eduardo Porro advocated routine hysterectomy with cesarean delivery
- Silver wire stitches were developed by the gynecologist J. Marion Sims
- 1880 - 1925 = transverse incisions of the uterus – reduced the rate of infection and rupture
- Extraperitoneal c/s • introduction of penicillin in 1940 • low cervical incision = Munro Kerr, 1926 • became technique of choice

PREVALENCE

The incidence of cesarean section is steadily rising. During the last decade there has been two to three fold rise in the incidence from the initial rate of about 10%. Apart from increased safety of the operation due to improved anesthesia, availability of blood transfusion and antibiotics

Reasons why the cesarean rate increased

- Women are having fewer children, thus, a greater percentage of births are among nulliparas,

- Average maternal age is rising, old-nullipara
- The use of electronic fetal monitoring Breech presentation
- Incidence of midpelvic forceps and vacuum deliveries has decreased
- Rates of labor induction continue to rise
- Obesity
- Concern for malpractice litigation
- Concern over pelvic floor injury associated with vaginal birth
- 1Socioeconomic and Demographic factors

ABSOLUTE INDICATION-C-SECTION	RELATIVE INDICATION C-SECTION
1. Vaginal delivery is not possible. Cesarean is needed even with a dead fetus 2. Indications are few: 3. Central placenta previa 4. Contracted pelvis or cephalopelvic disproportion (absolute) 5. Vaginal obstruction (atresia, stenosis) 6. Pelvic mass causing obstruction (cervical or broad ligament fibroid) 7. Advanced carcinoma cervix	More often multiple factors may be responsible 1. Cephalopelvic disproportion (relative) 2. Previous cesarean delivery 3. Non-reassuring FHR (fetal distress) 4. Dystocia 5. Antepartum hemorrhage 6. Malpresentation 7. Failed surgical induction of labor, Failure to progress in labor 8. Bad obstetric history— 9. Hypertensive disorders 10. Medical-gynecological disorders

TIME OF OPERATION

• Elective • Emergency

***Elective*—**When the operation is done at a prearranged time during pregnancy to ensure the best quality of obstetrics, anesthesia, neonatal resuscitation and nursing services.

***Emergency*—**When the operation is performed due to unforeseen or acute obstetric emergencies. An arbitrary time limit of 30 minutes is thought to be reasonable from the time of decision to the start of the procedure.

Types of Operations

- Lower segment
- Classical or upper segment

Preoperative Preparation

- Informed written permission for the procedure, anesthesia and blood transfusion is obtained.
- Abdomen is scrubbed with soap and nonorganic iodide lotion. Hair may be clipped.
- Premedicative sedative must not be given.
- Non-particulate antacid (0.3 molar sodium citrate, 30 mL) is given orally before transferring the patient to theater. It is given to neutralize the existing gastric acid.
- Ranitidine (H2 blocker) 150 mg is given orally night before (elective procedure) and it is repeated (50 mg IM or IV) one hour before the surgery to raise the gastric pH.
- Metoclopramide (10 mg IV) is given to increase the tone of the lower esophageal sphincter as well as to reduce the stomach contents. It is administered after about 3 minutes of pre-oxygenation in the theater.
- The stomach should be emptied, if necessary by a stomach tube (emergency procedure).
- Bladder should be emptied by a Foley catheter which is kept in place in the perioperative period.
- FHS should be checked once more at this stage.
- Neonatologist should be made available.
- Cross match blood when above average blood loss (placenta previa, prior multiple cesarean delivery) is anticipated.
- Anesthesia—may be spinal, epidural or general, However, choice of the patient and urgency of delivery are also considered.

POST OPERATIVE CARE

First 24 hours: (Day 0)

- Observation for the first 6–8 hours is important. Periodic check up of pulse, BP, amount of vaginal
- Bleeding and behavior of the uterus (in low transverse incision) is done and recorded.
- Fluid—Sodium chloride (0.9%) or Ringer's lactate drip is continued until at least 2 – 2.5 liters of the solution are infused. Blood transfusion is helpful in anemic mothers for a speedy post-operative recovery. Blood transfusion is required if the blood loss is more than average during the operation (average blood loss in cesarean section is approximately 0.5 to 1 liter).
- Oxytocics: Injection oxytocin 5 units IM or IV (slow) or methergin 0.2 mg IM is given and may be repeated.
- Prophylactic antibiotic (cephalosporins, metronidazole) for all cesarean delivery (see p. 642) is givenfor 2–3 days. Therapeutic antibiotic is given when indicated.
- Analgesics in the form of pethidine hydrochloride 75-100 mg is administered and may have to repeated.
- Ambulation—The patient can sit on the bed or even get out of bed to evacuate the bladder, provided the general condition permits. She is encouraged to move her legs and ankles and to breathe deeply to minimize leg vein thrombosis and pulmonary embolism.

- Put to the breast for feeding after 3–4 hours when mother is stable and relieved of pain.

Day 1: • Oral feeding in the form of plain or electrolyte water or raw tea may be given. Active bowel sounds are observed by the end of the day.
Day 2: • Light solid diet of the patient's choice is given.
• Bowel care: 3–4 teaspoons of lactulose is givenat bed time, if the bowels do not move spontaneously.
Day 5 or Day 6: The abdominal skin stitches are to be removed on the D-5 (in transverse) or D-6 (in longitudinal).
Discharge: The patient is discharged on the day following removal of the stitches, if otherwise fit. Usual advices like those following vaginal delivery are given. Depending on postoperative recovery and availability of care at home, patient may be discharged as early as third to as late as seventh postoperative day.

CARE IN THE POSTNATAL WARD
Once care is transferred to the postnatal ward, the blood pressure, temperature, respirations and pulse must be checked every 4 hours and recorded using a modified obstetric early warning score chart (MOEWS).

In addition, the wound and lochia should be inspected at the same time. Removal of the urinary bladder catheter should be carried out once a woman is mobile after a regional anaesthetic and not sooner than 12 hours after the last epidural 'top up' dose.

Healthcare professionals caring for women who have had a CS and who have urinary symptoms should consider the possible diagnosis of: urinary tract infection, stress incontinence (which occurs in about 4% of women after CS) or urinary tract injury (which occurs in about 1 per 1000 women afterbirth by CS).

The mother should be encouraged to move her legs and to perform leg and breathing exercises, however routine respiratory physiotherapy does not need to be offered to women after a caesarean section under general or regional anaesthesia, as it does not improve respiratory out comes such as coughing, phlegm, body temperature, chest palpation and auscultatory changes.

The woman should be helped to get out of bed as soon as possible following a CS, and should also be encouraged to become fully mobile. Prophylactic low molecular weight heparin and antiembolic or thrombo embolic deterrent ('TED') stockings should be prescribed.

However, the first dose of low molecular weight heparin should be delayed until 4 hours after the intrathecal injection or removal of the epidural catheter. Women who have had a general anaesthetic for CS may feel very tired and drowsy for some hours.

A woman may complain of a feeling of detachment and unreality and may feel that she does not relate well to the baby. The woman who is concerned should be reassured and begiven the opportunity to talk freely.

Possible cesarean delivery complications
Some possible complications of cesarean deliveries are as follows:

- Post surgery infection or fever
- Too much blood loss
- Injury to organs
- Emergency hysterectomy
- Blood clot
- Reaction to medication or anesthesia
- Emotional difficulties
- Scar tissue and difficulty with future deliveries
- Death of the mother
- Harm to the baby

Vaginal Birth After Previous Cesarean (Vbac) Delivery
VBAC are many (Table 22.3). Maternal and perinatal mortality rates following VBAC-TOL are the same when compared for elective repeat cesarean births.

In suspected maturity: It is better to wait for the pains to start or membranes to rupture, whichever occurs earlier and then to do cesarean section.

Vaginal delivery: If the previous section was done for some **non-recurrent indication** and the uterine scaris sound, a vaginal delivery is to be planned.

Management of Labor and Delivery For Vbac-Tol
Spontaneous onset of labor is desired. Induction of labor with prostaglandins increases the risk of uterine scar rupture.

- An intravenous line is commenced with Ringer's solution.
- Blood sample is sent for Hb%, group and cross matching.
- Labor monitoring—clinically (for scar dehiscence) and electronically for fetal behavior. Careful serial clinical assessment is needed to ensure adequate cervico metric progress of labor.
- Analgesia—epidural is not contraindicated. It neither delays the course of labor nor delays the diagnosis of scar rupture.
- Oxytocin for augmentation of labor may be used selectively and judiciously. Augmentation of labor increases the risk of uterine scar rupture and the risk of cesarean section.
- Prophylactic forceps or ventouse to cut short the second stage is used.
- *Routine exploration of the uterus*: Most prefer not to explore the uterine scar as a routine. It is done in selected cases only when there is continued and excessive vaginal bleeding or maternal hypotension inspite of well contracted uterus.
- Others prefer to do it as a routine. Two fingers are introduced to palpate the scar internally for detection

of any asymptomatic scar rupture. However, asymptomatic scar rupture or dehiscence generally heals well.

Selection criteria for (VBAC–TOL)

a. One previous lower segment transverse scar
b. Pelvis adequate for the fetus
c. Continued labor monitoring possible
d. Availability of resources (anesthesia, blood transfusion and theater) for emergency cesarean section within 30 minutes of decision
e. Informed consent of the woman.

Contraindications for VBAC-TOL (Indications for cesarean delivery)

a. Previous classical or inverted 'T' shaped uterine incision
b. Previous two or more lower segment cesarean section
c. Pelvis contracted or suspected CPD
d. Presence of other complications in pregnancy—Obstetric (preeclampsia, malpresenation, placenta previa) or medical
e. Resoruces limited for emergency.

Benefits and complications of VBAC–TOL

- Decreased maternal morbidity(infection and others)
- Reduced length of hospital stay
- Decreased need for blood transfusion
- Decreased risk of abnormal placentation and need for successive cesarean delivery in next pregnancy.

Risks of elective repeat cesarean delivery

- Increased maternal morbidity
- Increased length of hospital stay
- Increased risk of hemorrhage and need for blood transfusion
- Increased risk of abnormal placentation hemorrhage and successive cesarean delivery in the next pregnancy.

SUMMARY

To save the life of the mother and baby cesarean section is opted .women undergoing repeat cesarean sections have a risk of increased morbidity due to increased intra-operative complications. To avoid this one should keep the cesarean section rate at reasonable limit with appropriate surgical techniques and to limit primary cesarean section rate.

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