



Obstetrics and Gynecology Cesarean section

**University Of Fallujah
College Of Medicine**

Lecture : 3

Stage : 4th Year

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Department: obstetrics and Gynecology

Date: 30|9|2025

Learning objectives

- 1.** Review the indications, prerequisites and procedures of cesarean section.
- 2.** Know the different incisions commonly used in cesarean section and their possible complications.
- 3.** Know the complications of cesarean section.

Cesarean section

A caesarean section is a surgical procedure in which incisions made through a woman's abdomen (laparotomy) and uterus (hysterotomy) to deliver one or more babies. In the UK, between 25% and 30% of all babies now delivered by caesarean section.

Classification

- Urgent (category 1): immediate threat to life of woman or fetus.
- Emergency (category 2): no immediate threat to life of woman or fetus.
- Scheduled (category 3): requires early delivery Category.
- Elective (category 4): at a time to suit the woman and maternity services.

Indications

The four major indications accounting for greater than 70% of operations are:

- Previous caesarean section.
- Malpresentation (mainly breech).
- Failure to progress in labour.
- Suspected fetal compromise in labour.
- Other indications, such as multiple pregnancy, placental abruption, placenta praevia, fetal disease and maternal disease, are less common.

Procedure

1. Informed consent

Both the risks and benefits to be discussed with patients and recorded on the consent form.

2. Preparations:

Anesthesia

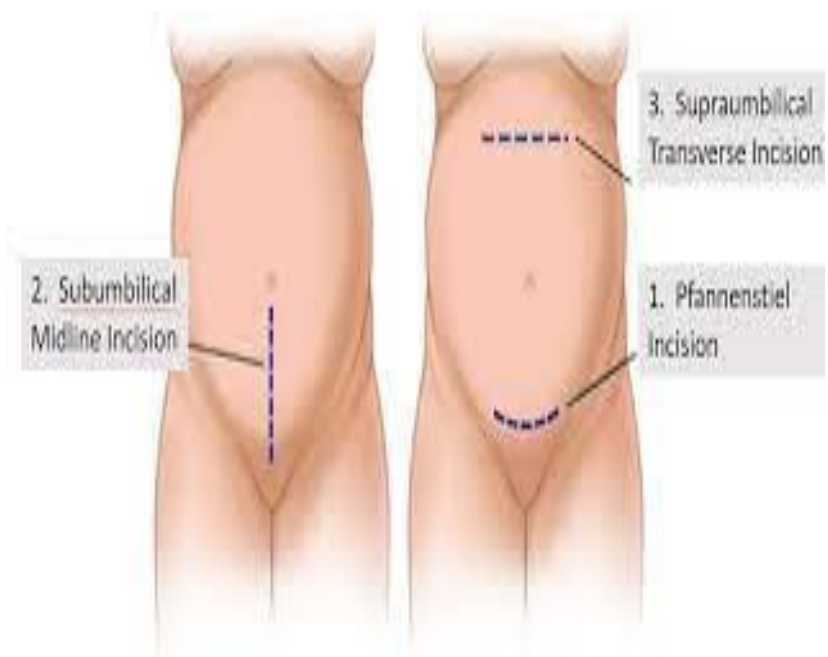
Most scheduled caesarean sections are performed under spinal anaesthesia if an epidural has been sited during labour, there is usually sufficient time to top-up the anaesthesia in preparation for emergency caesarean section.

General anesthesia is occasionally required where regional anesthesia is contraindicated or ineffective, or where general anesthesia is preferred due to the degree of urgency.

- ❑ The bladder should be emptied before the procedure commences and a urinary catheter is usually left in situ.
- ❑ A left lateral tilt minimizes aorto-caval compression and reduces the incidence of hypotension.
- ❑ The woman's abdomen is cleaned and draped.
- ❑ Prophylactic antibiotics should be administered intravenously prior to the surgical incision.

3. Abdominal incision

- The skin and subcutaneous tissues are incised transversely two finger above the symphysis pubis (Pfannenstiel incision). The transverse suprapubic incision has the advantages of improved cosmetic results, decreased analgesic requirements and superior wound strength.
- The rectus sheath incised transversely.
- The fascial sheath separated from the underlying muscle.
- The recti separated.
- The peritoneum incised and the abdominal cavity entered.



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A vertical skin incision indicated in:

- Extreme maternal obesity.
- Suspicion of other intra-abdominal pathology necessitating surgical intervention
- Where access to the uterine fundus may be required (classical caesarean section).

The vertical incision provides greater ease of access to the pelvic and intra-abdominal organs and may be enlarged more easily; however, the incidence of wound dehiscence is increased.

4. Uterine incision: two types:

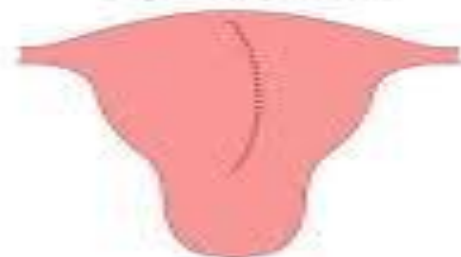
- A lower uterine segment transverse incision:** used in over 95% of caesarean deliveries
- Vertical incision**

Advantage LSCS:

- Easy of repair.
- Reduced blood loss.
- Low incidence of dehiscence or rupture in subsequent pregnancies.



(a) Transverse lower segment incision



(b) Classical caesarean section incision

Figure 15.7 Uterine incisions for Caesarean section. (a) Transverse lower segment incision. (b) classical Caesarean section incision

Vertical incision (classical cesarean section): There are relatively few absolute indications, these include:

- Lower uterine segment obscured by fibroids.
- Lower segment covered with dense adhesions.
- Other indications include placenta praevia.
- Transverse lie with the back down.
- Fetal abnormality (e.g. conjoined twins).
- CA cervix.

Disadvantage of vertical uterine incision

- Excessive blood loss.
- Difficult to repair.
- High incidence of dehiscence or rupture in subsequent pregnancies.

5. Once the uterus incised, the membranes ruptured if still intact, and the operator's hand is

Positioned below the presenting part. If cephalic, the head flexed and delivered either manually or with forceps. Fundal pressure applied by the assistant to aid delivery.

6. Once the fetus delivered, an oxytocic agent (5 IU oxytocin IV) administered to aid uterine contraction and placental separation. The placenta delivered by controlled cord traction

Closure

- Closure of the uterus performed in either single or double.
- Peritoneal closure is not routine and depends on the operator's preference.
- Closure of rectus sheath.
- The skin closed with either absorbable or non-absorbable suture material or with clips.

Complication

Intraoperative complications

- ❑ **Haemorrhage:** may be a consequence of damage to the uterine vessels or may be incidental because of uterine atony or placenta praevia.
- ❑ **Caesarean hysterectomy:** the most common indication for caesarean hysterectomy is a previous caesarean section especially when the placenta accreta. Other indications for hysterectomy are atony and uterine rupture.
- ❑ **Placenta praevia:** the proportion of patients with a placenta praevia increases almost linearly after each previous caesarean section.
- ❑ **Organ damage:** bowel damage may occur during a repeat procedure or if adhesions are present from previous surgery. The risk of bladder injury increased after prolonged labour where the bladder displaced caudally and after previous caesarean section where scarring obliterates the vesicouterine space.

Postoperative complications

Infection: Women undergoing caesarean section have a 5–20-fold greater risk of an infectious complication when compared with a vaginal delivery. These include wound infection, endometritis, bacteremia and urinary tract infection.

Venous thromboembolism: caesarean section is a major risk factor. The incidence of such complications can be reduced by adequate hydration, early mobilization and administration of prophylactic heparin.

Subsequent birth following caesarean section

Up to 70% of women with a previous caesarean section who labour achieve a vaginal delivery.

Providing the first operation was carried out for a non-recurrent indication, then it is appropriate to offer a trial of labour after caesarean. It is important, however, to discuss the risks and benefits of elective repeat caesarean section (ERCS) as compared to attempted vaginal birth after caesarean section (VBAC).

Consideration of the risk of scar rupture is probably the most important. The risk of uterine rupture following attempted VBAC is between 0.5% and 1%.

