

Cesarean section in dog and cat

Dr Alok Kumar

Assistant Professor Cum Jn Scientist
Department of Veterinary Gynaecology and Obstetrics
Bihar Veterinary College, BASU. Patna

Drugs used in surgery

Root Kustritz, 2010

Anesthetic protocols for canine Cesarean section

Root Kustritz,2010

Protocol 1

1. If the mother is calm and quiet, and can be catheterized without sedation
2. Induce anesthesia with propofol to effect.
3. Intubate and maintain a light plane of anesthesia with sevoflurane or isoflurane in oxygen.
4. Line block or epidural for pain management
5. After neonates are delivered, add hydromorphone or oxymorphone IV for additional maternal pain control.

Protocol 2

1. Sedate with fentanyl and diazepam.
2. Epidural containing bupivacaine and morphine.
3. Provide oxygen via facemask

Protocol 3

1. Mask induction with sevoflurane or isoflurane in oxygen.
2. Intubate and maintain a light plane of anesthesia with sevoflurane or isoflurane in oxygen.
3. After neonates are delivered, add hydromorphone or oxymorphone IV for maternal pain control

Preoperative management

Before surgery,

The abdomen is clipped and prepped from xiphoid to the pubis

the surgery site should be draped widely to permit extension of the incision cranially or caudally, respectively,

An intravenous catheter is placed and intravenous fluid administration is initiated before anesthetic induction.

Injectible antibiotics, such as first-generation cephalosporins, are given to animals that are toxic, septic, or carrying dead fetuses.

Surgical technique: cesarean section

1. Perform a large midline celiotomy.
2. Gently retract the uterus from the abdomen
3. isolate it with moistened laparotomy pads.
4. Tent the uterine body with thumb forceps or tense between thumb and finger and gently make a midline partial incision through the uterine wall.
3. With Metzenbaum scissors, carefully extend the incision so that the fetus can be removed easily.
4. Extract the fetus through the incision
5. Break the amniotic membrane surrounding its muzzle with fingers or scissors and clamp

- 1 Retract the uterus from the abdomen until the body and horns are exposed.



2 Extract the fetus through the midbody uterine incision and break the membranes around the neonate's muzzle (inset).



3 Clamp the umbilical cord at least 3 cm distal to the neonate's abdominal wall.



4 Remove the placenta from the uterus by gentle traction after delivery of each neonate.



Episiotomy

Preoperative management

1. The perineal region is clipped around the vulva and anus.
2. The vestibule and vagina should be flushed with a dilute chlorhexidine or iodinated anti-septic solution during the surgical prep.
3. The animal is placed in a perineal position with a purse-string suture in the anus, which is covered during draping

Surgery

Episiotomy incisions usually extend from the dorsal commissure of the vulva to the beginning of the vagina, across from the urethral tubercle.

Before incising the tissues, the vestibule should be digitally palpated to identify its dorsal boundary.

This will help prevent accidental damage to the anus

- 1 For an elective episiotomy, incise the skin on midline with a blade



2 Transect the remaining layers with scissors.



6 Final appearance after skin closure.



Postoperative considerations

1. After surgery, animals should wear an Elizabethan collar for 7 to 10 days to prevent self-trauma.
2. The most common complications are swelling and discomfort.
3. Other complications are rare

4. Intravenous broad spectrum antibiotics

(e.g., first generation-cephalosporins) are administered prophylactically at induction

5. again in 2 to 6 hours.

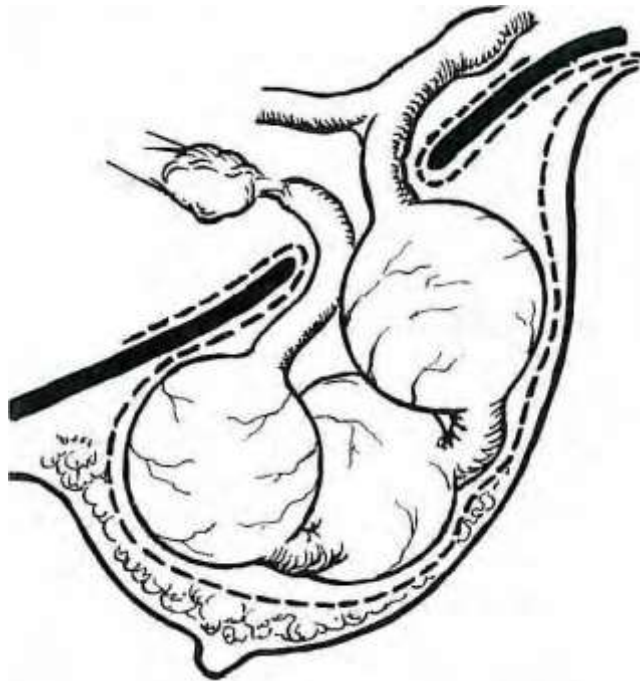
5. Epidural regional anesthesia provides excellent intraoperative and early post-operative analgesia.

6. If a rapid episiotomy is required (e.g., to remove a neonate),

the vulva skin and muscle can be blocked on midline with 0.2 mL/ kg of bupivacaine or lidocaine.

MISLANIOUS SURGICAL CORRECTIONS

Inguinal metrocele in a bitch gravid with three embryos of about 30 days



method - 1

- Reduce the hernia
- obliterate the sac
- allow pregnancy to take its normal course
- .
- In the great majority of cases it will not be possible to reduce the hernia by simple means

Method - 2

- Enlarge the hernial ring by incision of the abdominal wall and later close by suture after reduction of the hernia.
- Obliterate the sac; allow the pregnancy to continue.
- Pregnancy is uninterrupted and the animal's full breeding powers are conserved.

however, several technical difficulties

- precise incision of the abdominal wall forwards from the inguinal orifice is not easy owing to the presence of the large and tensely filled sac.

method - 3

- Dissect out the hernial sac
- incise its apex and expose the herniated uterus.
- Amputate the horn involved.
- Obliterate the hernial sac.
- If it happens that the animal is also pregnant in an abdominally situated horn this should not be interfered with.
- If an abdominally situated horn is empty and it is desired that the bitch shall be sterilized

Method - 4

- In those cases in which fetal development is at or approaching term
- it may be decided to proceed as described above
- but, instead of amputating the involved horn, to perform hysterotomy
- extract the fetuses with their membranes.