**Ovario-hysterectomy (in bitch and queen)**

Is the removal of the uterus along with ovaries to make the animal permanently sterile and thereby control population, which will aid in control of rabies.

**Indications:**
- To avoid breeding nuisance.
- Neoplasm of uterus
- Chronic endometritis.

**Anaesthesia and control:**
**Pre-medication**
Sedation/tranquilization/Analgesia: given to
- Reduce the dose of general anaesthetic
- Facilitate in handling during induction

**Atropine sulphate:** Given to
- Reduce side effects of pre-medication and anaesthetic e.g cardio-depressant effect of Xylazine and barbiturates
- Inhibit mucous secretion if respiratory tracts

**Vets Beyond Borders Protocol**

Pre-anaesthetics – combination of
- Xylazine (20mg/ml) @ 1ml/10kg (max 2ml only)
  (Pups < 6 months @ 0.03ml/kg
- Atropine Sulphate (0.6mg/ml) @0.2ml/10kg

Induction by IV injection
- Diazepam (5mg/ml) 0.5ml
- Ketamine (50mg/ml) 5ml

1ml of mix /10kg

**National Animal Hospital, Chubachu, Anaesthesia Protocol**

No pre-anaesthetic is given, and induction is done by using the Ketamine, diazepam and Triflupromazine.

Ketamine (50 mg/ml) - 5 ml + Diazepam (5 mg/ml) – 0.5 ml + Triflupromazine (20mg/ml) 1 ml, all of this is taken in a syringe, mix thoroughly and given @ 1 ml / 4.5 kg body weight.
Site:
- Mid ventral line, two inches behind the umbilicus running backward.

Preparation of the site:
- Wash the area around the site, shave it and paint it with Tr. Iodine.

Anatomy of uterus:

Technique:
- Take a sterile B.P blade mounted on to B.P handle, place a bold incision of about 2 to 3 inches at the site.
- Incise through the muscle layers and peritoneum to enter the abdominal cavity.
- Insert index finger through the wound directed towards pelvic cavity.
- Locate the urinary bladder and search beneath it for the uterus. (at the uterus may displaced towards right or left side)
- Hook the organ that comes in contact with the finger and pull it out. If it is an intestine place it back into the abdominal cavity and try again.
- When the uterus is obtained confirm it by looking for uterine horns(if the organ does not divide into two horns it is not an uterus)
- Apply a ligature at the uterine body, if the uterus is small the blood vessels on the either sides of uterus can be included in the same ligature. When the animal is on heat the vessels will be enlarged and has to be ligatured separately and cut it.
- Ligature the uterine horns separately, cut them tear the attachment of the uterus, and remove it.
- Apply Tr. Benzoine / Tr. Iodine on to the cut stumps of the uterus before placing it into the abdominal cavity.
• Suture the abdominal wound, peritoneum can be sutured either separately or along with the muscles. Simple continuous or simple interrupted suture pattern be used. Suture material – catgut, sterile silk or cotton thread.

• Suture the skin wound with simple interrupted, Interrupted horizontal mattress or vertical mattress suture, material – nylon.

Postoperative care:
• Clean the wound and apply a thin layer of cotton and apply Tr. Benzoine / Tr. Iodine
• A dose of long acting antibiotic e.g. Benzathine Penicillin deep im.
• A dose of painkiller.

NOTE: The owner should be advised to report if the wound opens or infected.

Ovarectomy:
Is the surgical removal of the ovaries from sows/gilt to render them sterile. In sows, the uterine horns are long and coiled. Once the ovaries are removed the animals does not come to heat and it is important while fattening. When the ovarectomy is not done the animal come to regular heat and as a result the weight gain is slowed down.

Indication:
• To promote quick weight gain

Site:
One inch behind the umbilicus, on the mid ventral line, extending back wards for about 2–3 inches.

Anaesthesia and control:
Local infiltration along the line of incision, dorsal recumbence

Preoperative preparation:
• Animal should be starved over night before the operation(this has to be done to get enough space during the operation which other wise is not possible with the full stomach and intestines)

Procedure:
• Enter the abdominal cavity as described in hysterectomy in bitch
• Search for one of the uterine horns and pull it out on to the surface
• Follow the uterine horn to reach ovary on that side.
• Gently catch hold the ovary and apply a ligature at the base
• Cut the above the ligature to remove the ovary
• Check the stump of the ovary for haemorrhage apply Tr. Benzoin and release the stump into the abdominal cavity
• Trace back the uterine horn to reach the uterine body from where follow the other uterine horn to reach the ovary of that side
• Remove the ovary in that side as before
• Close the abdominal opening similar to the hysterectomy in bitch

Post operative care:
• Dress the skin wound
• Give a dose of long acting antibiotic
• A dose of analgesic

Note: advise the farmer to keep the animal in a dry place until the wound heals