

- SOP No:** ATT 064
- SUBJECT:** Digit amputation in cattle.
- REASON FOR USE:** This technique is applied to cattle requiring the removal of a digit as a result of disease or injury.
- This technique can only be demonstrated if a current clinical case exists
- POLICY:** This procedure may only be performed by, or under the supervision of an operator skilled in the technique.
- PRECAUTIONS:** The reason for claw amputation is deep infection so aseptic technique is difficult to achieve but should be the aim. Restraint of the animal is necessary, ideally in a tip crush with the animal in lateral recumbency but can be done (depending on the animal and facilities) with the animal standing in a crush with a headlock. Sedation or general anaesthesia will be required for some animals. Tourniquets should not be left in place for more than one hour. There is debate over the benefits of closing the skin wound or leaving it open to allow drainage. This decision must be left up to the practitioner on the particular case.
- EQUIPMENT:**
- Scrub brush and hoof knife
 - Lignocaine 2%
 - Clippers
 - Needles and syringes
 - Xylazine (and/or other appropriate sedative)
 - Alcohol swabs
 - Iodine or chlorhexidine preparation swabs
 - Scalpel blades # 24 (or similar)
 - Sterile gloves
 - Standard surgical kit including suture material
 - Tourniquet
 - Ropes or pulley system to lift and secure leg
 - Obstetric wire and handles
 - Gauze bandages and elastoplast
- PROCEDURE:**
1. The animal is restrained as appropriate for its size and temperament and for the facilities available. Sedation used as appropriate for age, weight, temperament and health of the animal. Foot is restrained as appropriate for the situation. See [SOP ATT02 Bovine Foot Examination](#) and [SOP ATT010 Arthrocentesis \(Joint tap\) in Ruminants](#). The claw and interdigital space are cleared of debris with scrub brush and hoof knife.
 2. The limb is clipped from the mid metacarpal region or midmetatarsal region distally and the area is scrubbed for aseptic surgery.
 3. A tourniquet is placed below the carpus or tarsus and lignocaine without adrenalin is injected through a 20-22ga needle

- intravenously distal to the tourniquet. 10-30ml is adequate and analgesia develops in about 10 minutes.
4. A final surgical scrub is applied.
 5. An incision through the skin and subcutis to the bone is made along the abaxial and axial surface of the coronary band and vertical incisions are made cranially and caudally from the interdigital space to the proximal interphalangeal joint. If the practitioner elects to attempt to close the skin wound, then the skin is dissected from the underlying digit and is preserved as much as possible.
 6. The amputation is performed in either of 2 positions depending on how much tissue is diseased. If only the coffin joint and distal phalanx is affected, the amputation is through the middle phalanx. If the middle phalanx or pastern joint is affected then the amputation is through the distal third of the proximal phalanx (described here). Obstetric wire is placed in the incision in the interdigital space. The wire is used to cut through the distal third of the proximal phalanx. Interdigital fat and necrotic tissue is removed. Blood vessels are ligated with absorbable material as required.
 7. The skin flap can be sutured to cover as much of the wound as possible, or trimmed to size to allow drainage and granulation of the wound.
 8. The tourniquet is released slowly and is retightened. Antibiotics may be infused intravenously at this point. A few minutes later the tourniquet is slowly released again.
 9. Bandaging should be used, depending on the environment, to protect the surgical site from contamination and to apply pressure to reduce haemorrhage.

RECOMMENDATIONS: This is a salvage procedure to relieve pain and suffering as well as to prevent ascending infection of the limb but the animal should be culled as soon as feasible because the remaining claw breaks down much faster.
The animal should be kept in a clean, dry area until wound healing is complete.

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CHAIR OF AEC (Acting)

REFERENCES

1. Weaver, A.D Joint conditions. In: P.R. Greenough and A.D. Weaver, Editors, *Lameness in Cattle* (3rd ed.), W.B. Saunders, Philadelphia (1997), pp. 162-180.