

STANDING CASTRATION IN CAMELS

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ABSTRACT

A standing castration technique was performed in 12 camels. After administration of a low doses of xylazine for sedation and butorphanol tartrate for analgesia, the patient is placed in stocks and castration was performed as per routine. Advantages of this technique include the lack of need for general anesthesia or casting which may result in medical problems or injuries. The technique described was performed on 12 animals, 24 to 28 months of age without complications.

Key words : Camel, castration

Camels are castrated primarily for management reasons and mainly to eliminate rutting behaviors. Although early reports suggested that castration be practiced between 4 and 6 years of age, most camels can be castrated earlier (Leese 1927). Although castration may be practiced at any age. Early castration in llamas may delay normal closure of skeletal growth plate and may result in tall animals with a post-legged conformation that predispose the animal to arthritis and /or patellar luxation (vanHarreveld *et al*, 2000).

Most camels are castrated when they reach their second year of age. This practice ensures that the camel has sufficiently developed and both the testicles are in the scrotum. There are no studies on the proper age of castration depending on the use of animals. Castration is not desirable for draught animals in India because of the common belief that animals become obese and lose their working stamina (Nigam, 1992). Castration of racing camels is outlawed in some countries (i.e. United Arab Emirates).

Techniques used for castration of camelids are not different from those used in equine. The major variations concern anesthesia and position of the animal and incision or non incision of the vaginal tunic (closed versus open castration) (Tibary and Anouassi, 1997). The most commonly used techniques involve the use of sedation and local analgesia and casting of the male in a sternal or lateral recumbency (Gahlot and Chouhan, 1992; Ramadan and Abdin-bey, 1997; Tibary and Anouassi, 1997).

Casting and operating on camel in recumbency present several disadvantages including need for several people, risks for animals and personnel associated with casting, risks associated with anesthesia and greater possibility of contamination. Standing castration is practiced quite frequently in South American Camelids particularly llamas (Barrington *et al*, 1993; Dargatz and Johnson, 1987). Standing castration in llamas has been practiced after analgesia obtained by intramuscular injection of butorphanol tartrate (0.1mg/kg) and local infiltration of 2% lidocaine (Barrington *et al*, 1993).

Standing castrations has the advantage of comfort both for the surgeon and patient and eliminate the risks associated with general anesthesia. The present report describes a technique used in camels for standing castration.

Materials and Methods

Twelve male camels aged 24-28 months underwent standing castration and were examined for being free from abnormalities and had normal descended testicle.

All males were sedated with Xylazine 0.1mg/kg, IV and were placed in stocks (Fig 1). The tail was held to side and after further detailed examination the animals received an intramuscular injection of butorphanol tartrate (0.1 mg/kg IM). The rectum was emptied of faecal material and a roll of gauze was placed in the rectal cavity to prevent defecation. The perineal area and scrotal skin was shaved if needed and scrubbed for surgery (Fig 2). Local anesthesia was

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achieved by subcutaneous and intratesticular injection of 2% lidocaine. In general 5 to 8 ml of 2% lidocaine were injected into the testicular parenchyma using a 21 gauge needle to prevent albuginea haemorrhage. All castration were performed using closed technique (preservation of the integrity of the vaginal tunic) with the exception of one testicle in one animal where an open castration was performed because the surgeon has incised too deep and opened the tunica vaginalis.

A vertical 5 to 8 cm scrotal incision along the long axis of the testicle, about 1 to 2 cm from the median raphe was made (Fig 3). The testicle was exteriorised by exerting digital pressure. The free border of the testicle was then grasped with towel forceps at the level of its caudal aspect (Fig 4). The scrotal fascia and fat were stripped from the common vaginal tunic as far proximally as possible with help of a gauze sponge. A circumferential transfixing ligature using absorbable suture material (PDS No. 0 or Catgut No. 1) was placed as far cranial to the pampiniform plexus as possible (Fig 5) before transecting of the cord with an emasculator. The emasculator is maintained in place for 2 minutes (Fig 6). The procedure was then repeated on the other testicle. In all animals but one, the scrotal incision were left to heal by second intention. In one animal, the scrotal sac on one side was packed with gauze and the scrotal skin sutured because of haemorrhage.

All animals received an injection of long acting tetracycline and tetanus toxoid and discharged from to owners after an observation period of 24 hours. Owners were instructed to exercise their animals and check periodically the incision for excessive swelling or drainage.

Results and Discussion

In standing castration technique the only complication observed was the hemorrhage on one side in one animal (surgery done by a veterinary student). In this particular situation, the scrotal sac was packed by a roll of gauze and sutured. Sutures were removed and the gauze discarded 14 hours after surgery and no further bleeding was observed. Butorphanol tartrate used intramuscularly at the dose of 0.1 mg/kg seemed to provide adequate analgesia for the surgery time (10 to 20 minutes) and the postoperative period.

Fever, excessive swelling, ascending cellulitis or anorexia were neither observed nor reported by the owners in the postsurgical period. The most common

problem encountered after castration was rubbing the perineal area against panels and tail twitching. Other complications of castration such as scirrhus cord, haemorrhage and local infection (Gahlot and Chouhan, 1992; Ramadan and Abdin-bey 1997; Tibary and Anouassi, 1997) were not seen in animals of present study. Standing castration in camels does not predispose or increase risks for herniation. This is due to the peculiar anatomical position of the inguinal canal and the testicles.

Standing castration proved to be easily performed in young camels. However, it is important to note that patients need to be selected based on normal testicular development to eliminate cryptorchids or animals with short scrotum which may retract the testicles and make incision and



Fig 1. Camel in stocks after sedation.



Fig 2. Perineal area prepared for surgery.

manipulation more difficult (Garcia Pereira *et al*, 2004). The intratesticular administration lidocaine seems to help relax the testicles and facilitate their manipulation. Temperament of the animal needs also to be taken into consideration. The preference of the authors is practice a closed castration. However, in some cases (i.e. older animals), open castration may be more advantageous because the testicular cord can



Fig 3. Incision of the scrotal skin.

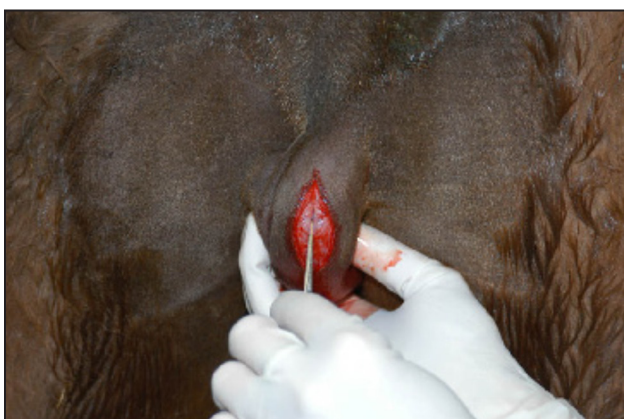


Fig 4. Exteriorized testicle held with towel clamps.



Fig 5. Circumferential transfixing suture of the testicular cord.

be too large. Open castration would allow the better exposure of the spermatic cord. The common vaginal tunic may be excised separately with the emasculator.

Healing was uneventful in animals of present study. Second intention healing of scrotal incision is improved if all scrotal fat and fascia is excised and the incision is large enough to allow adequate drainage. If the patient had not been previously vaccinated against tetanus we recommend postsurgical



Fig 6. Hemostasis is guaranteed by maintaining the emasculator in place for 1 to 2 minutes.

injection of tetanus toxoid (intramuscularely) as well as tetanus antitoxin (subcuta-neously). Topical insect repellents may prevent fly strike is also recommended.

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BOOK REVIEW

Name of the Book : **Camel- Management and Diseases**

Editor : **Falah K. Al Ani**

Edition : **1st 2004, Hard Cover, pages 455**

ISSN : **9957-445-00-6**

Publisher : **Dar Ammar Book Publisher**

There is yet another reference book on camels in the market. This book encompasses 30 chapters in 455 pages containing A to Z of Camel Science. There are 16 contributors from various countries who have authored one or another chapter. Attempt has been made to include new world camelids and Bactrian camels too. There are selected references at the end of every chapter. Chapters have been described elaborately with plenty of subheadings in each. Although the book is on art paper but photographs are black and white. Some coloured photographs especially of histopathology could have added beauty of the book. The chapter on parasitic diseases is longest. The chapter on infectious diseases should have included the separate chapters of viral, bacterial and fungal diseases. The description of fore stomach on page number 206 and 207 bears details of omasum and abomasum. The next edition of this book should describe the parts of the fore stomach as compartment 1,2 and 3. Few tables bear important data and in next edition of the book the source of data should be provided for the convenience of a reader, for example table no. 23 and 25 do not have a mention of source of data.

This book bears majority of topics related to the dromedary camel and an effort was laid to cover every minor to major topic. Some chapters are of special interest in the book because these are not stressed in other available books on camelids, e.g. the camel in the Pre- Islamic and Islamic state, camel sports, physical and chemical disorders, endocrine system and haematopoietic system.

I am sure that this book will prove a good help to all researchers and practitioners because it contains volumes of information related to the camelids. I congratulate Dr.Falah K Al-Ani and his co-contributors for bringing out this unique and useful publication.

Dr. T.K. Gahlot

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Camelids 1991-2000 and Selected Research in Camelid Physiology and Nutrition