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DEPARTMENT OF CLINICAL STUDIES

**PREOPERATIVE, OPERATIVE, AND POSTOPERATIVE SURGICAL
MANAGEMENT OF DIFFERENT VETERINARY CASES REPORT IN AND
AROUND BISHOFTU TOWN, OROMIA, ETHIOPIA**

MVSC THESIS

BY

SULTAN ALIYI ADEM

JUNE, 2023

BISHOFTU, ETHIOPIA



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DIFFERENT VETERINARY SURGICAL CASES REPORT IN AND AROUND
BISHOFTU TOWN, OROMIA, ETHIOPIA**

**A Thesis Submitted To the College of Veterinary Medicine and Agriculture of Addis
Ababa University in Partial Fulfilments of the Requirements for the Degree of
Master of Veterinary Science in Veterinary Surgery**

BY

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DEPARTMENT OF CLINICAL STUDIES

MVSc IN VETERINARY SURGERY

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As members of the examining board of the final MVSc open defense, we certify that we have read and evaluated the thesis prepared by Sultan Aliyi Adem entitled **“Preoperative, Operative, and Postoperative Management of Different Veterinary Surgical Cases Report in, and around Bishoftu Town, Oromia, Ethiopia”** and recommended that it be accepted as fulfilling the thesis requirement for the degree of Masters of Veterinary Science (MVSc) in Veterinary Surgery.

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STATEMENT OF THE AUTHOR

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Submission Date: _____

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LIST OF ABBREVIATIONS

BOSCC	Bovine Ocular Squamous Cell Carcinoma
BPV	Bovine Papilloma Virus
CBC	Complete Blood Count
FAO	Food and Agricultural Organization
FPP	Fortified Procaine Penicillin
GC	Gregorian Calendar
GDP	Gross Domestic Product
IM	Intra Muscular
OHE	Canine Ovariohysterectomy
OSCC	Ocular Squamous Cell Carcinoma
PGA	Polyglycolic Acid
SDFT	Superficial Digital Flexor Tendon
UK	United Kingdom
VTH	Veterinary Teaching Hospital
WHO	World Health Organization

ABSTRACT

Veterinary doctors have several responsibilities for animal welfare, humans, and environmental health in today's world, delivering enormous benefits to society. Their main objectives are like medical doctors and the health and welfare of animals in their care. In the current report, the surgical management of different cases report was performed from December 24, 2021, G.C., to February 22, 2023, G.C. concerning its pre, during, and postoperative management of sixteen (16) cases of domestic animals. Among these cases, Six (6 cases) were Bovine, three (3 cases) were Ovine; one (1 case) was Caprine, two (2 cases) were Equine (Donkeys); three (3 cases) were Canine and one (1 case) was Feline of different age, sex, and breeds. Based on the system affected, the reproductive system 31.25% (five cases out of sixteen cases 5/16); the digestive system 18.75% (three cases 3/16); the musculoskeletal system 12.5% (two cases 2/16); the Special sense organ system 6.25% (one case 1/16), the integumentary system 6.25% (one case 1/16) and wounds of different body parts 25% (four cases 4/16) were out of sixteen (16 total cases). Moreover, the follow-up of the surgical cases indicates that: recovered cases 87.5% (14 cases/ 16 cases), one animal slaughtered 6.25% (1 case/16 cases), and one case 6.25% (1 case/16 cases) was Euthanized based upon the owner request and severity. All the above cases were performed under standard anesthetic protocol based on their species differences and individual variety as premedication, induction, and maintenance stages. In addition, the Antibiotic has administered during follow-up in line with some Analgesic agents. Lastly, the animal owners advised how to threaten their animal patients and the rest of their livestock.

Keywords: *Case Report, Domestic Animals, Preoperative, Operative, Postoperative Care*

1. INTRODUCTION

Ethiopia has a large population of domestic animals in all of Africa; by having 65 million head of cattle, 40 million sheep, 51 million goats, 8 million camels, and 49 million chickens (Jiregna, 2019). Up to forty percent (40%) of the agricultural GDP (gross domestic product), nearly twenty(20%) of the total GDP, and 20% of the country's foreign exchange earnings were supplied by this industry (Mulugeta, 2019).

Veterinary services in Africa are run by the Food and Agriculture Organization (FAO) and the World Health Organization (WHO), both of which focus on food production, veterinary public health, and preventive medicine. Today, veterinarians play a multitude of roles in the health of animals, humans, and the environment, and bring enormous benefits to society. With high aspirations, our profession has always been the most respected in the medical field (Commission, 2019)

Veterinarians are in charge of animal medicine. After completing a degree in veterinary medicine, they can pursue careers in areas such as government, education, and medicine. Clinical veterinarians may work with farm animals, zoo animals, laboratory animals, pets, or a combination thereof. It's an incredibly varied and rewarding job. Most veterinarians care for pets such as dogs, cats, rabbits, and birds. Like a people's doctor, he puts the health and welfare of the animals in his care first. These are accomplished by: Advising pet owners on how to diagnose, treat and prevent disease and how to best care for their animals (East Cott veterinary clinic and hospital, 2023).

In veterinary surgery, technology and its outcomes go hand in hand, and as they often say, go hand in hand. Thanks to advances in veterinary medicine, animals have the best prognosis and the fastest recovery time. These don't just apply to horses, large animals, and pets. This technique is also advantageous for exotic animals. Operating room technology improves the lives of people looking for sick animals. Veterinarians will have access to tools and medicines that will make their jobs easier, more accurate, more efficient, and, most importantly, more successful (Innovations, 2021).

The demand for high-quality veterinary service is requested every where in the country, since the value of the drought animal, meat, and milk animal increased more than triple the rate when compared back only one decade. On top of this, the cost of the drug and diagnostic materials, and facility increased at a remarkable rate. Moreover, the livestock-related economic chain was the backbone of the gross domestic product in the country, i.e., Ethiopia, with a high quantity of livestock for centuries in the continent. Unlikely, the service given and the qualified manpower in the country were far computed with what was expected by animals and humans depending on livestock for their lively hood. On the other hand, the number of practical professionals (Surgeons) was scant and did even not fulfill the minimum standard of the country's higher institution veterinary teaching college to deliver the practical course for fabricating well-equipped veterinary surgeons. Besides, the need for good animal health services requested by livestock owners and farm holders was high in Ethiopia; there is still a low level of surgical case treatment because of low man powers specifically Veterinary Surgeons, to treat and teach the students at higher levels in the country.

Therefore, the current thesis objectives are:

- To gain experience in surgical case handling and its preoperative, during, and postoperative management.
- To compile and document surgical cases for future study.

2. METHOD AND MATERIALS

2.1. Study Area

The preoperative, during-operative, and post-operative surgical management of various cases in domestic animals were investigated from December 2021 to February 2023 G.C. at Professor Fesseha Gebreab Veterinary Teaching Hospital and Clinical Centres, specifically: Addis Ababa University Veterinary Teaching Hospital, Donkey Sanctuary, and field farm, Ethiopia. The Bishoftu is geographically located in the Oromia Regional State, 47.9 kilometers southeast of Addis Ababa, the capital of Ethiopia, and it extends between 38 degrees 00' East and 38 degrees 48' East longitudes, or 8 degrees 43' North and 8 degrees 48' North, respectively. This study's spatial analysis determined that the town's area is around 14,878 hectares.

2.2. Study Participants

The study animals were those admitted to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital and Donkey Sanctuary Veterinary Clinic for various surgical procedures. They were small and large animals of different breeds and ages that come from various management systems. Cattle, donkeys, goats, and sheep of the local breed were raised in semi-intensive conditions. As companion animals, small animals (dogs and cats) were kept and fed meats and other concentrated foods. The report included case reports of surgeries done on the medical problems of sixteen (16) domestic animals of various breeds, species, ages, and sexes, including two donkeys, six cattle, three sheep, one goat, two donkeys, three dogs, and one cat in various surgical cases.

2.3. Study Method

Pre-operation, operative, and post-operative surgical management of various cases in domesticated animals have been addressed in this study using a descriptive clinical case report methodology.

2.4. Study Technique

Complete medical assessment performed on different species of domestic animals presented to the relevant veterinary hospital and center with diverse surgical cases requiring minor or major surgical manipulations either of elective or emergency treatment. As a result, every case was examined, checked, and findings relating to several clinical parameters were documented. These clinical parameters included patient signalment, history, physical examination, and diagnostic tests. Furthermore, the patient's anesthesia and surgical risk were pre-evaluated. Specific surgical procedures and post-operative care were prescribed and carried out under aseptic conditions and a safe anesthetic protocol as required by the given cases based on the examinations and clinical findings. In addition to peri, intra, and postoperative communication by phone calls and physical presence, all animals undergoing surgical procedures were monitored.

2.5. Patient Confirming Record

During presentations to the VTH, where they came from, genders, breeds, ages, species, clinical findings, and general state of health were documented.

2.6. Case History

Using technical language, every aspect of the current and previous histories of the problem was chronologically and carefully questioned. Information about the patient's condition, progression, past experiences with related illnesses and medications, route, regimen, and results, length of pregnancy, management system, frequency of the case, recurrence, progression of the condition, duration, and feeding system are all detailed and significant. Additionally, evaluation and documentation of various clinical parameters and systemic clinical information were put into practice.

2.7. Assessments of the Body

Before enduring any surgical operations, especially those involving the administration of general anesthetics, the examination of visible vital organs and systemic physiological data were observed, analyzed, and documented. These vital factors include the following kinds of measurements made: respiratory rate, heart rate, rectal temperature, the color of the visible mucous membranes, animal hydration level, rumen motility (in ruminants), and palpation of the superficial lymph nodes. Each case was further thoroughly examined for signs of any anatomical or functional issues with the affected region(s). Additionally, manipulation of the affected regions and/or parts enabled the identification of their type, consistency, size, attachment, and pain. When necessary, exploratory punctures were also carried out to reveal the natural properties of the fluids or substances present in the area or areas being studied. Finally, before undergoing a specific surgical procedure, all essential information was evaluated, concluded, decided upon, and interpreted.

2.8. Ethical Perspective

The request for permission was carefully examined in the context of research ethics by the Addis Ababa University College of Veterinary Medicine and Agriculture ethical review committee, which concluded that there were no ethical issues with the proposal's goals and methodology thus granting the go-ahead to carry out the study present in the field of veterinary medicine.

3. PREOPERATIVE, OPERATIVE, AND POSTOPERATIVE MANAGEMENT OF DIFFERENT VETERINARY SURGICAL CASES REPORT

3.1. Rectal Prolapse in Buck

Abstract

A 3 months bright red local goat kid comes to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, with a history of a bright red, round mass of thick, friable tissue emerging from the anus during the night before admission, moreover, the kid continuously strains and blotting and moving around. Rectal prolapse was identified as the condition. After being cleaned with water, chlorhexidine, and povidone-iodine, the prolapsed mass was placed back in its original position, and a purse-string suture was used to secure it. The patient received three days of antibiotic and analgesic treatment, with a five-day follow-up. The animal recovered without incident.

Keywords: *Goat, Rectal Prolapse, Purse-String Suture*

Introduction

Rectal prolapses are typically not considered emergencies, although they should be treated immediately to reduce the risk of external trauma and ongoing tenesmus. Without treatment, there is a danger of peritonitis and mortality in those who are actively bleeding or who have substantial tears. Rectal prolapse is more common in sheep than in goats, primarily because display lambs have their tails docked short. Enteritis (coccidia, Salmonella), dysuria, estrogenic feeds, obesity, lush forages, and coughing are additional factors linked to rectal prolapse in small ruminants (Arulkumar *et al.*, 2022).

The simplest procedure for correction of rectal prolapse is a reduction by gentle massage and retention by application of a purse-string suture pattern using umbilical tape. The suture is passed in and out through the skin around the anal opening at a distance of 2 to 4 cm from the anus. An opening should be left when tying the purse string so that defecation is possible. The suture usually is left in place for 5 to 10 days. This suturing should be done only if the rectal mucosa is viable and no laceration is present on close inspection.

Treatment of the primary cause of the prolapse must be initiated immediately to prevent subsequent prolapse. When damage to the rectum is present, correction of the prolapse can be approached in different ways depending on the nature and extent of the injury. If only the mucosa is damaged, mucosal resection and anastomosis can be done (Anderson and Miesner, 2008).

Analgesics and antimicrobials should be used before and after surgery, and measures should be taken to soften the feces to facilitate passage past the anastomosis. This may include the administration of mineral oil or magnesium hydroxide or slightly increasing the legume or grain portion of the diet. Owners should monitor animals for general demeanor, appetite, abdominal contour, and fecal passage. Animals with increases in abdominal size, reductions in appetite, or evidence of constipation should be evaluated. Strictures, abscesses, peritonitis, dehiscence, and death are all potential postoperative complications (Hartnack and Jones, no date).

Case history and Clinical observation

Ato Mamush Chane comes with a 3-month-old red buck goat weighing 10 kg was brought in as an emergency case to Professor Fesseha Gebreab Veterinary Teaching Hospital on December 24, 2021, GC with a bright red cylindrical mass of black, crowded, friable tissue emerging through the anus. The owner used to keep the animal intensively by feeding wheat brand and hay the day before admission to VTH. Physical examination revealed prolapsed rectum, respiratory rate of 20 breaths/minute, Heart rate of 90 beats/minute, normal visible mucous membranes, and good body condition. The projecting red lump was identified as a rectum during a clinical examination of the perineal region. Based on history and clinical examination, the case was diagnosed as rectal prolapse (Fig 1: A).

Surgical procedure

After verification, the buck was taken to the VTH small ruminant unit room by his owner and prepared for correction of the problem. To desensitize the perineum and avoid straining, the treatment process started with epidural anesthesia, which was obtained by injecting 2 ml of 2% lidocaine hydrochloride (Jeil pharma. co. Ltd. Korea) at the rate of (@) 0.22mg/kg into sacrococcygeal space. The head of the kid was held by the owner and the prolapsed mass was

cleaned by water gently, then the hind limbs were lifted to lower its head relative to its hindquarters, allowing gravity to help rather than hinder the replacement.

A 0.5% povidone-iodine solution was scrubbed to the prolapsed portions to prevent contamination after the gross debris was washed off the mucosal surface with water. The prolapsed mass was returned slowly starting from the proximal part of the rectum. To prevent a recurrence, a loose, anal purse-string suture was placed while allowing a two-finger hole over the forceps to allow feces to flow (Fig. 1: C).

To relieve pain and post-operative complication, Pen-strip 2 ml Penicillin (24 mg/kg) and dihydrostreptomycin sulfate (30 mg/kg) (Pen & Strep® Norbrook UK)) IM, daily for three days, Ivermectin 2 ml (SC, Stat and Diclofenac 2 ml, IM, daily for three days were given to the kid (Fig 1: D). The owner was advised to provide his goat soft feed and bring it on the fifth day for suture removals. Fortunately, the kid fully recovered after five days without relapse (Fig 1: F).

Discussion

Rectal prolapse is more common in sheep than in goats, primarily because display lambs have their tails docked short, Enteritis (coccidia, Salmonella), dysuria, estrogenic feeds, obesity, lush forages, and coughing are additional factors linked to rectal prolapse in small ruminants (Arulkumar *et al.*, 2022). The current case also has a history of feeding wheat bran and hay that may predispose the animal to high estrogenic content and roughage of low water content cause constipation which induces straining on defecation. The simplest procedure for correction of rectal prolapse is a reduction by gentle massage and retention by application of a purse-string suture pattern using umbilical tape (Hartnack and Jones, no date). In line, with the above recommendation the problem in our case was resolved and retained by Polyglactin 910 (Vicryl) 2-0 instead of umbilical tape, which was removed after five days, and the goat's recovery happened without any problems in five days follow up.



Figure 1: Correction of rectal prolapse in Goat Kid.

A (Animal at presentation), B and C (Replaced and pulse string retain suture on progress), D (Antibiotic and anti-pain given immediately and for three days), F (Totally recovered bright buck).

3.2. Ovariohysterectomy in Bitch

Abstract

A 15kg intact local breed bitch was presented to Addis Ababa University Veterinary Teaching Hospital for surgical sterilization through Ovariohysterectomy. The owners requested to permanently sterilize the bitch since they didn't want any more puppies. Before surgery, a thorough physical examination of the bitch was conducted. Thence, the bitch was prepared for spaying with aseptic preparation of the surgical site. A caudal midline incision was performed to exteriorize the parts of the reproductive tracts to be removed. Finally after completing the dissection, the abdominal wall was closed layer by layer by using appropriate suture materials and suture patterns.

Keywords: *Bitches, Mid-line Incision, Ovariohysterectomy*

Introduction

Gonadectomy is one of the most commonly performed surgical techniques in veterinary practice since it is considered the most reliable mean of pet population control (Lee *et al.*, 2013). Canine Ovariohysterectomy, (OHE) commonly referred to as a spay procedure, is the removal of the ovaries and uterus from the female dog. It is performed both as an elective procedure and as a therapeutic surgical procedure to treat several female reproductive disorders (Ajadi *et al.*, 2018). It is mainly indicated for population control, prevention of diseases of the reproductive tract, and elimination of undesirable behaviors associated with hormonal cycling. For routine spaying, the best age for dogs is before puberty and dogs have their first heat at 5 to 12 months of age (Asrat and Melkamu, 2018).

However, there are certain contraindications to the procedure, such as if the bitch presents with a generalized condition with hypothermia, dehydration, and mydriasis (Bencharif *et al.*, 2010). Con of OHE is, a decrease in reproductive tract diseases, including pyometra and mammary neoplasia in bitches; a decrease in pregnancy and parturition-related disorders including metritis, mastitis, and dystocia; decrease in hormone-associated disorders such as vaginal prolapse in bitches and decrease in undesirable sexual behaviors. Prone of OHE are surgical and anesthetic complications, increased risk of neoplasia of various organ systems, obesity, and urinary incontinence in bitches (Asrat and Melkamu, 2018).

Case history and clinical examinations

Ato Buruk Tasawwa brought to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital (VTH) a 4 years female dog of 15kg on January 5, 2022, for requesting birth control normal alert bitch. At first general physical examination was done and the bitch had fair body condition and almost all the parameter was within normal limit. Then, the bitch was approved for spaying based on the findings.

Pre-operative preparation of the bitch

Before coming for the operation, the dog was withheld from feed for 12hrs and from water for 4hrs. After sedating and inducing, the bitch was prepared for surgery by clipping, shaving the hair from the liberal area, and cleaning the surgical field with a chlorhexidine surgical scrub solution for 5 min (Figure 2). The preparation of the surgical field was completed with a final spray of diluted iodine solution. Thence, sterile drapes were put and surgical instruments were used during surgery. Sterile surgical gloves were worn and the standard aseptic principle was followed in all surgical steps, including surgical scrubbing of hands with the iodine-based scrub solution and aseptic handling of instruments.

Anesthesia and animal control

Before commencing the surgical procedure bitch was administered premedication and induction agents with selected anesthetic drugs. As a premedication, ketamine (Ketamine Hydrochloride manufactured by Germany) @10mg/kg IM and diazepam @ 0.50 mg/kg were administered based on 15kg weight IM for sedation. Once sedated, an intravenous catheter was placed and 0.9% lactated ringer solution was administered @10 ml/ kg/hr throughout the surgery. Then, it was induced with a combination of ketamine @5mg/kg and diazepam @ 0.25 mg/kg IV. Thence, the bitch was taken onto a patient table and kept in dorsal recumbence by stabilizing and tying each limb onto the table. Maintenance of the anesthesia throughout the procedure was achieved with a ketamine and diazepam combination with reduced concentration by half.

Surgical correction and treatment

A sterile drape with central fenestration was put and fixed to bitch's body by towel claps after positioning, stabilizing, and aseptically preparing the incision site. The midline incision was made in the cranial third of the caudal midline, for easy exteriorization of the ovaries. Then incision was made through the three layers (skin, linea alba, and peritoneum) using a surgical blade to expose the abdominal contents.

After incising skin and fascia, the subcutaneous fat was removed to visualize the linea alba on the ventral midline and to put the incision over it. After picking up the loose fascia and fat that covers the external rectus sheath with Brown Addison forceps and extending by snipping off this tissue with Metzenbaum scissor, the bright white fibers of the external rectus sheath were exposed. The linea alba was grasped with rat-toothed forceps and tented up and a stab incision was put on the linea alba using a number 10 scalpel blade with the sharp edge facing up to avoid any possibility of causing injury to the underlying abdominal organs.

Then, the incision was lengthened using Mayo scissors with the jaws of curved hemostatic forceps inserted through the stab incision to keep the linea alba tented up and the stab incision remain open to facilitate lengthening of the incision.

After around 6-8 cm long incision is made on the caudal ventral abdominal midline was made, the uterine horn was located using an ovariohysterectomy hook from the left part first. After exteriorizing the left uterine horn, on hemostatic clamp was applied on the proper ligament and the ovary was held between the fingers to retract it while the suspensor ligament is stretched with an index finger or broken held between the index finger and the thumb.

After the ovary was sufficiently exteriorized to the abdominal incision, a window was made in the mesovarium caudal to the ovarian vessels, and three hemostatic clamps were applied to the ovarian pedicle (Figure 2: B). Then, the circumferential ligature was applied distal to the third hemostat farthest away from the ovary, and the jaws of the middle hemostatic forceps were opened and a second trans-fixation ligature was placed in the place where the hemostat crushed the pedicle and the jaws of middle clamp closed again. Then, the pedicle was severed between the clamp closest to the ovary and the middle clamp. The clamp is

applied distally from the ovary, and removed to place the ligature on the groove of the pedicle. The pedicle was ligated by vicryl 2-0.

Next, the pedicle was inspected for bleeding and gently replaced into the abdomen. The same procedure is repeated on the opposite ovarian pedicle. After both ovarian pedicles are ligated, the broad ligament was torn to allow uterine exteriorization. Similarly, three clamps were placed on the uterine body just cranial to the cervix before ligation. The uterine arteries located on each side of the uterine body were individually ligated caudal to the most caudal clamp before severing the uterine body. Thence, the middle clamp was removed and the uterus was ligated in the groove that remains. The uterine body was severed between the proximal and middle clamps. Then pedicle was inspected for bleeding and gently replaced into the abdomen.

Moreover, the abdominal incision was stitched up routinely in three layers (Figure 2: C). The peritoneum and body wall was sutured as the first layer from the bottom with a simple interrupted pattern by using the Vicryl 1-0. In the second layer, the subcutaneous tissues were sutured with simple continuous by using the vicryl 2-0.

Finally, the skin was sutured with a subcuticular suture pattern by using vicryl 2.0, and finally, the area was scrubbed with diluted iodine solution before the patient was raised from the surgical table (Figure 2: D).

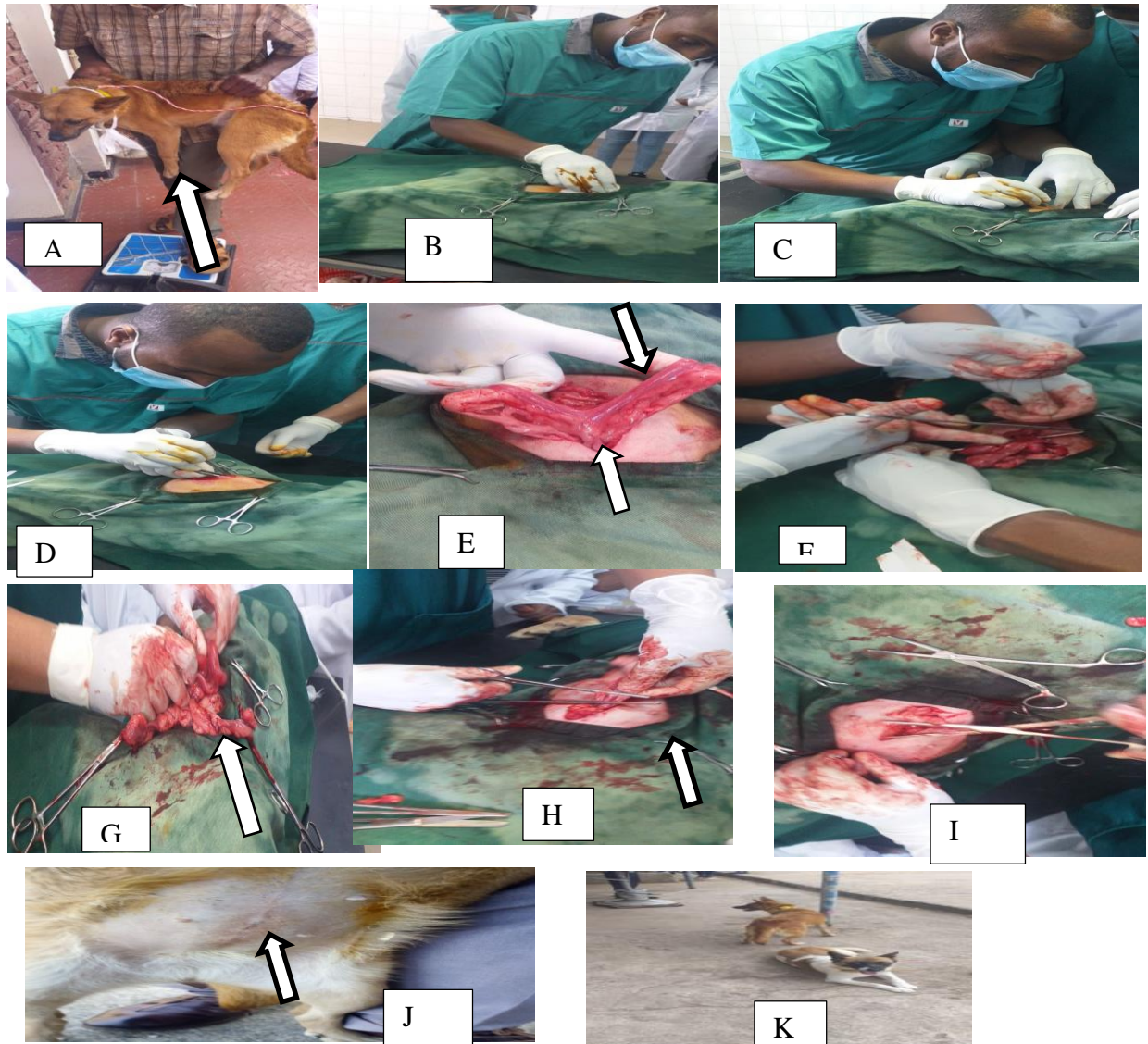


Figure 2: Surgical procedure in Ovariohysterectomy in Bitch.

A (Animal weight taken for anesthesia), B (Surgical site scrubbing), C (Skin incision on progress), D (Stab incision of linea alba by stunting up using forceps), E (the white arrows indicates Uterine body (below), horn (above) of exteriorized organ for incision), F (Transfixation of ovarian pedicles), G (the two horn after incision), H (Uterine body transfixation), I (check for bleeding after cutting the uterine body) J (Completely healed surgical site after 20 days post-operative and K (The bitch with her friends at hospital).

3.3. Surgical Excision of Feline Sarcoïd in Queen

Abstract

A 3kg four-year-old, Abyssinian cat or a local breed dark white cat presented to Addis Ababa University, College, of Agriculture and Veterinary Medicine, Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, with the red circular mass gradually developed, mobile, firm, and painless up on palpation, slightly lateral to the sternum toward the right forelimb. Moreover, the nodule was ulcerative and diagnosed as feline Sarcoïd or feline cutaneous papillomatosis. The mass was successfully removed under general anesthesia by gentle excision of the tumor. The Queen completely recovered without relapse and any complications during follow-up and study time.

Keywords: *Feline Sarcoïd, Queen, Surgical Excision*

Introduction

Sarcoïd is the term, which describes benign fibroblastic proliferation, generated, mainly, by bovine papilloma type 1 and 2 (PVB1 and PVB2) (Bezerra *et al.*, 2020). From the first descriptions of feline cutaneous Fibropapillomas in the 1990s, the morphologic similarity to equine sarcoïds was immediately recognized. Since equine sarcoïds have a strong association with papillomaviruses, a similar association was investigated in cats. Early investigations proved negative; however, a recent report provides strong evidence of an association of feline fibro papillomas with bovine papillomavirus. These tumors are rare, with outdoor rural cats and those with known exposure to cattle having a higher prevalence. Like equine sarcoïds, local recurrence of feline cutaneous fibro papillomas is common, but metastasis has not been reported (Kiefer *et al.*, 2017).

Also, because the tumors are generally self-limiting and are thought to affect a rural population of cats, they are not as likely to receive veterinary attention. It is hoped that increased awareness of feline cutaneous fibro papillomas will lead to a more accurate estimate of their true prevalence and that experimental investigations will determine the role of bovine papillomavirus in their development (Hanna and Dunn, 2015).

Case history and clinical examinations

Ms. Almaz Tilahun brought a four (4) year old dark white cat to our hospital three days before on January 17, 2022, GC Abyssinians or a local breed, shorthaired, red mass developed under her chest and gradually increased one month. The owner adds up that, her cat reduced feed intake and feel pain upon touch. The cat used to play on the farmland of their garden with cattle and children, before acquiring the problem. Up on clinical examination of vital parameters and affected part red, circular, pendulated, mobile, painless up on palpation b gloved hands, ulcerative feline papillomatosis observed on the sternal part of the Queen as indicated below (Figure 3: A). Based on the history, clinical findings and owner request the queen appointed to come after two days for surgical excision by fasting it for 12 hours from feed and 6 hours without water on January 21, 22 GC.

Animal preparation and surgical procedure

As premedication the cat was sedated by a combination of ketamine (Ketamine Hydrochloride manufactured by Germany) @ 5mg/kg and diazepam @ 0.50 mg/kg were administered based on its weight, IM. After sedation, the liberal area was clipped around the Sarcoid at an appropriate distance and washed and scrubbed for surgical excision of the Sarcoid. The patient paced to the surgical table on dorsal recumbence to tie the fore and hind limbs at the table holder below it just opened like the book to expose the tumor area. Then, a surgical drape was placed on the other animals' bodies by exposing only the surgical area through its fenestration hole. After, holding the mass by thumb forceps as indicated in (Fig 3: B), the circular skin incision approximately 3 cm far from the edge of the tumor by including normal tissues below started (Fig 3: C). The excision continues up to the joining of the initial point from the circular skin cut start and the mass is completely removed (Fig 3: D) below, while the active bleeding was from sub-cutaneous arteries and vain fixed by forceps and ligation. After checking for active bleeding, and complete removal of the tumor, the subcutaneous tissues closed by simple continuous suture pattern by vicryl 4-0 as (Fig 3: E) below indicates. Finally, the skin was sutured by 3-0 vicryl in a subcuticular sure pattern (Fig 3: F) below, the surgical site was scrubbed by dilute iodine solution (Fig 3: G), and the animals' Diclofenac sodium 2 ml, IM, injection as analgesia for daily for two days and pen strip 2ml, IM, daily for three days. After, seven days the suture material was removed from the Queen.



Figure 3: Surgical excision of Feline Sarcoid in Queen.

A (Animal at presentation), B (The mass clumped by thumb forceps), C (Circular skin incision started), D (Mass Excision in progress), E (Closure of subcutaneous muscles by simple continuous), F (Subcuticular skin closure); G (The removed Sarcoid), and H (Post-operative appearance on animal on the surgical table).

Conclusion

Despite its rare occurrence, the Sarcoid must be included in the differential diagnosis of cutaneous neoplasms, in cats, which present the same clinical and pathological characteristics, and despite its benign nature, surgical excision should be considered (Bezerra *et al.*, 2020). In line with the above research, the current case was admitted to surgical excision of the mass and it was successfully removed and completely recovered without any complications. In conclusion, feline cutaneous papillomatosis can be managed by surgical excision by keeping the animal under general anesthesia.

3.4. Management of Acute Paraphimosis in Ram

Abstract:

A six-month-old lamb was admitted to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital of Addis Ababa University with paraphimosis caused by urethral amputation one day before the admission date due to an ability to urinate for about one day. The case was managed successfully, but the owner's request to slaughter her Ram since the predisposing factor may be calculi was not resolved by the medical, and simple urethral amputation and correction of prolapsed mass did not confirm the probability to urinate in the future. Other, surgical option like penile amputation was not recommended to the animal because of cost and risk of surgery were not balanced with the cost and size of the animal. Therefore, the lamb was approved for the owner to slaughter her lamb since the case was handled for only welfare purposes to release the animal from the hospital with the problem.

Keywords: *Lamb; Paraphimosis; Pulse string suture, Welfare*

Introduction

Paraphimosis following copulation or spontaneous erection is relatively uncommon in rams. Juvenile paraphimosis in male lamb is a rare incidence and has not been reported so far. This condition may occur in active adolescent rams with strong sex drive and occurs during coitus or faulty mounting, probably due to great enthusiasm, curiosity, and inexperience. However, the inability to withdraw the penis into preputial sheath results in circumferential swelling. Edema and balanoposthitis. Prompt treatment is essential to correct such stressful conditions. In delayed cases due to severe congestion and accumulation of inflammatory exudates, it gets converted to non-painful edema or complicated to cause gangrene owing to trauma and subsequent infection. The present communication reports a case of acute paraphimosis in a male lamb in its early adolescent period and its successful therapeutic management (Debasis Jana, 2014).

Case history and clinical examinations

Mother Aster H/Mariam brought six (6 months) year old 20 kg local breed Ram to Addis Ababa University, College, of Agriculture and Veterinary Medicine, Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, one day before with difficulty of urination for about one day and the lamb was diagnosed by the clinician and urethral process was amputated, but the animal was not able to micturate after the treatment, even the animal acquired inability to return its penis to its cover 12 hours after the treatment.

Moreover, Pain was evident and prepuce was oedematous. Conservative treatments like massaging, hydrotherapy, and administration of Non-Steroidal Anti-inflammatory and analgesic drugs (NSAID) were tried to help in normal retraction of the penis but failed.

On clinical examination, it revealed protrusion of the cranial portion of the penis hanging out of the preputial orifice in highly inflamed and contaminated with soil (Figure 4: A). The animal was unable to retract the penis into prepuce, strain, and stretch its back as if for urination. Temperature, pulse, respiration, feeding, and rumination were normal. The lamb was still alert and active in all respect. The exposed portion of the penis was hyperemic and dry (Figure 4: B).

Surgical procedure

The lamb was then routinely prepared for aseptic penile manipulation and secured in dorsal recumbency, and lidocaine local anesthesia infiltrated around the prepuce. The site was prepared by clipping preputial hairs and the exposed portion of the penis was cleaned with a normal saline solution followed by a 5% iodine solution (Figure 4: C below). Sterile chilled water was applied over the exposed penis to reduce swelling. The Vaseline jell was liberally applied over the exposed penis for lubrication and the penis was replaced manually into the preputial cavity through pressure pulling sheath over it with the other hand (Figure 4: D below). A stay suture was applied around the preputial orifice to prevent further protrusion (Figure 4: E, F, and G) below. The animal was not given any antibiotics or analgesics since the owner planned to slaughter her animal this night.

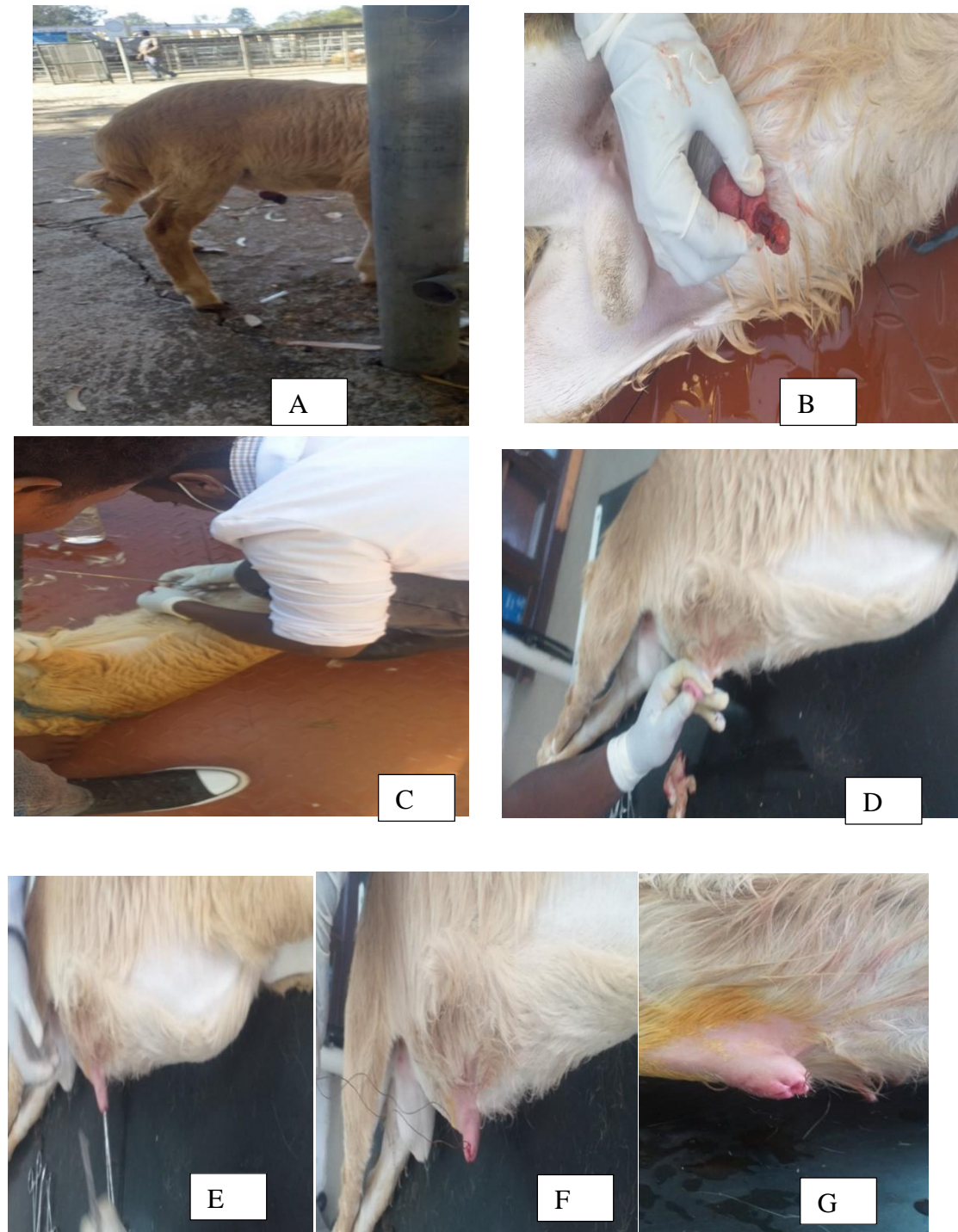


Figure 4: Correction of Paraphimosis in Ram.

A (Animal at presentation time the white arrow below figure indicates the prolapsed penis with contaminations), B (Examination before a replacement for any lacerations), C (Returning the penis into prepuces'), D (Completely replaced and hold up by thumb in place),

E (Inserted blunt forceps to allow urination if any), F and G (Purse string suture by Cut-gut 2-0 temporarily).

Conclusion

Based on the history, clinical findings, and owner interest the Ram was not given any antibiotics post-correction and the case was handled only for the welfare purpose and sent home for slaughter for human consumption before the condition got worse. Because the animal is normal in every system except the inability to urinate may be calculi at the level of sigmoid flexure since urethral amputation cannot resolve the problem. Other, surgical option like penile amputation was not recommended to the animal because of cost and risk of surgery were not balanced with the cost and size of the animal. Therefore, the lamb was approved for the owner to slaughter her lamb.

3.5. Management of Ascites in Bitch

Abstract

A geriatric ten years old local female dog was presented to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital on January 18, 2022, GC, with abdominal swelling, respiratory distress, lethargy, anorexia, and weakness. Physical examination revealed dyspnea, pale mucous membrane, and undulating movement (thrills) of fluid on tapping the abdomen. Ventral abdominal laparotomy was done to the evacuation of excess fluids and abdominocentesis for drainage, but the animal cannot survive since that, its management and body condition was poor. Therefore, the dog was euthanized by administration of high-dose fortified procaine penicillin (FPP) injection 10ml, intra cardinally on January 28, 2022, GC (after 11 days) based upon the owner's request and poor prognosis of the case. Finally, the animal was taken to post mortems room, and splenomegaly and liver cirrhosis were appreciated.

Keywords: *Abdominocentesis, Ascites, Bitch, Euthanasia, Laparotomy*

Introduction

Accumulation of serous fluid in the sac of the peritoneal cavity is referred to as ascites (Dabas *et al.*, 2011). It is one of the most common clinical problems found in dogs (Bhagwan and Jain, 2019), with complaints of progressive abdominal distension, appetite, and lethargy; clinical examination revealed pyrexia (103.2 ° F), distended abdomen on both sides with palpable fluid thrill, dyspnoea, dehydration, and pale mucous membranes. Ascites is commonly defined as the pathologic accumulation of fluid in the abdominal cavity due to the escape of fluid between the parietal and visceral peritoneum from blood vessels, lymphatic's, internal organs, or abdominal masses and is also one of the sequelae of various primary diseases (Dhillon, Kaur and Singh, 2020). A diagnostic evaluation of an animal presented with ascites may include a complete blood count (CBC), biochemical evaluation, abdominal paracentesis, biochemical and cytological analyses of the fluid obtained, radiographs, biopsy, and organ function tests (Regmi and Shah, 2017).

Case history and Clinical observations

A ten years old local female dog was presented to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital on January 18, 2022, GC; with a history of progressive abdominal distension for one month, inappetence, and lethargy for two weeks, and weakness for one week. Moreover, the dog was hidden from the owner in a water dish for days and appeared wet during the presentation. Upon observation, the dog water jar is as below (Figure 5: A). Clinical examination revealed pyrexia (103.2°F), distended abdomen on both sides with palpable fluid thrill, dyspnoea, dehydration, and pale mucous membranes. Based on history and clinical findings, the prognosis was told to the owner as guarded and the case was managed for immediate relief only.

Treatment

Since the dog was weak and cannot move to bite and scratch physical restraining by tying the mouth and the limb of the bitch on the outpatient table in lateral recumbency and locally 2% lidocaine hydrochloride (2mg/kg rate) was used on ventral abdomen prepared aseptically for removal of extra fluid from the abdomen(Figure 5: C).

Then, the laparotomy was conducted and 1 to 2 liters of fluids were removed from the abdominal cavity. After, completely draining, the wound was closed with the routine surgical procedure by using Synthetic PGA (size 1-0). Post-operative care with antibiotic procaine penicillin 24mg/kg and dihydrostreptomycin sulfate 30mg/kg, 5ml, IM, daily for three days was given at home. Moreover, the owner was advised to provide her dog with a protein-rich diet, with low salt to prevent the recurrence and aggravation of the condition (Figure 5: D).

However, the condition of the animal gets worse day to day rather than recovery the bitch progressively emaciated, depressed, and get ends (Figure 5: E).

After ten days of follow up the owner request to kill his animal humanely and support the dog by cart to reach the hospital.

Finally, the dog was approved to be euthanized and taken for pathological examination to see the cause of ascites (Figure 5: F).

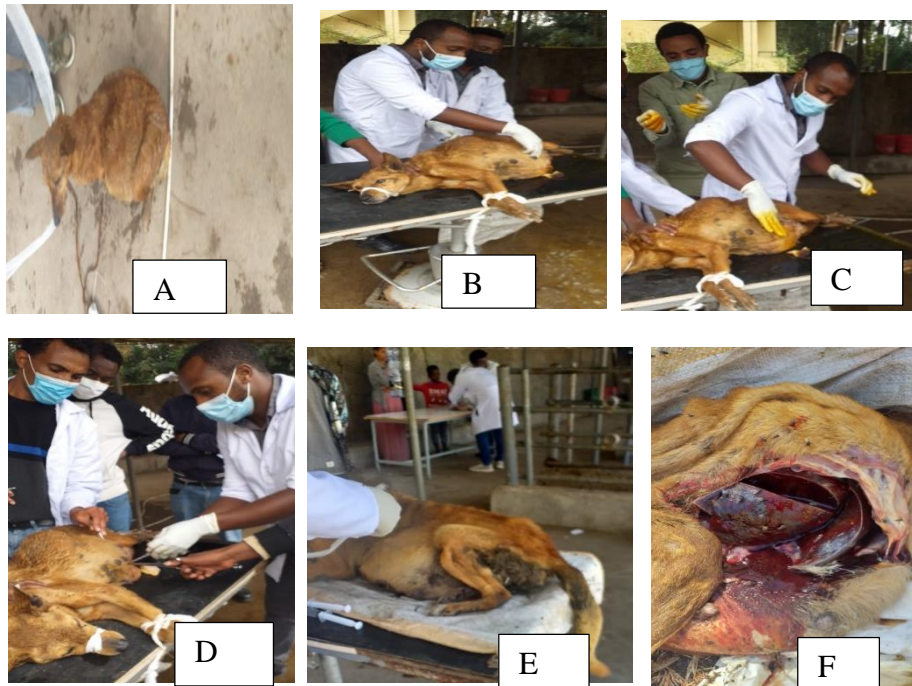


Figure 5: Management of Ascites in Bitch.

A (Animal at presentation), B (Restraining and placement of animal on operation table), C (Laparotomy and drainage yellowish fluid from the patient), D (Closure of incision site), E (After ten day, a weak animal with black diarrhea) and F (Postmortem finding, Cirrhotic liver, and splenomegaly).

Discussion

Free fluid in the abdomen can be treated by tapping the abdomen utilizing a drainage technique called Abdominocentesis. Some cases will respond to treatment with a diuretic depending on the cause of ascites, however, severe ascites usually require Abdominocentesis to manage initially. But in this case, free fluid from the abdomen was removed by Laparotomy and the animal cannot be recovered.

3.6. Enucleating of Bovine Ocular Squamous Cell Carcinoma Affected Eye from Cross Breed Holstein Frisian Cow

Abstract

An eight-year-old crossbreed Holstein freesia cow was presented to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital on 4th April 2022 GC with a gradually developed white mass on the right side of the eye of his cow for one month. Up on clinical examination of the affected eye, the white bulge of the eye protruded from the conjunctiva, lacrimation, absence of corneal reflection, and extensive tumor of the eye were observed. Moreover, the eye was checked for any foreign body if exist, differential diagnosis of the cancer eye and other vital parameters were found normal. Based on history and clinical findings the owner consented to surgical removal of the affected eye and the cow was approved for emergency surgery of eye enucleation under local anesthesia. Then, the animal was verified and the trans-palpebral approach of surgical eye enucleation was completed successfully under local anesthesia. Postoperative follow-up with antibiotic therapy for five days and analgesic with good management by the owner supports the old dairy cow to survive by one eye throughout the rest of her life.

Keywords: *Cancer Eye, Cow, Trans palpebral Enucleation*

Introduction

Eye damage is still common in bovine ocular squamous cell carcinoma (BOSCC), also commonly known as 'eye cancer'. The most common ocular neoplasm in cattle is bovine eye squamous cell carcinoma, also called "eye cancer", which can be very costly (Pugliese *et al.*, 2014). Ocular squamous cell carcinoma (OSCC or "eye of cancer") has been mentioned in the literature since the late 19th century. The etiology of BOSCC is determined by genetic variables, latitude, altitude, environmental factors such as exposure to sunlight (ultraviolet), viruses (bovine papillomavirus and bovine herpesvirus types 1 and 5), and lack of eyelid pigmentation, age, greatly influenced by diet. Habit. This tumor occurs most frequently in the Hereford, Holstein, and Simmental cattle breeds. Calf between the ages of 3 and 7 are most commonly affected. and it has nothing to do with gender (Karakurt *et al.*, 2021).

Medical management is sufficient in many cases. Surgery is necessary in some circumstances. Fortunately, in the majority of cases of bovine ocular illness, field surgery is still an effective treatment. The best outcomes will be ensured by a thorough physical examination, suitable patient preparation, appropriate preoperative care, and competent surgical technique (Fornazari *et al.*, 2017). In comparison to all other ocular illnesses, OSCC is the one that causes enucleation in cattle the most frequently. According to the above authors, European nations have a lower reported incidence of OSCC than those in Africa and the Americas the development of OSCC is thought to be influenced by a variety of circumstances, and many therapeutic methods have been suggested (Pugliese *et al.*, 2014).

Case history and Clinical observations

Mr. Tesfaye Tilahun brought an eight-year-old crossbreed Holstein freesia cow on 4th April 2022 GC to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, with the gradually developed white mass on the right side of the eye of his cow one month. The owner added up the information of animal was treated at the local clinic with dark brown medicine (20% Oxytetracycline 20mg/kg IM, two doses) which the professional provided after 48 hours two times a week ago, and the animal was not improved. Up on clinical examination of the affected eye, the white bulge of the eye protruded from the conjunctiva, lacrimation, absence of corneal reflection, and extensive tumor of the eye were observed. Moreover, the eye was checked for any foreign body if exist, differential diagnosis of the cancer eye and other vital parameters were found normal. Based on history and clinical findings the owner consented to surgical removal of the affected eye and the cow was approved for emergency surgery of eye enucleation under local anesthesia.

Surgical procedure

After verification of the identity of the animal, it was restrained physically by rope and kept at lateral recumbence by the right side up to access the affected eye. Then, the liberal area was cleaned with water and soap, rinsed y a normal saline solution and the hairs around the liberal area clipped including the eyelash. Then, retrobulbar and auropalpaebal ophthalmic nerve block was achieved locally by 2% Lidocaine hydrochloride 20mg/kg, through medial and lateral canthus of the eye and dorsally and ventrally deep to the retrobulbar nerve by total 20ml/animals of it at a different site.

After the analgesic state was confirmed, tarsorrhaphy of the lower and upper eyelids was performed by vicryl 2-0 suture material starting from the lateral canthus of the eye without knot formation by simple continuous pattern up to the medial canthus. Then, the two ends of the suture material were held together and were used for easy grasping of the ball and manipulated by one hand for rotating and gently tracing the globe.

For this case, a trans-palpebral approach for eye enucleation was selected, and circumferential skin incision at a distance of two centimeters (1cm) from the border of eyelids was started from the dorsal part of palpebral toward the lateral and medial canthus of the eye. Then, into the fascia, subcutaneous tissue, and orbicularis oculi muscle surrounding the eye, using a combination of blunt and sharp dissection. A reference point was the interior of the bony orbit. Access to the caudal portion of the orbit required a sharp transection of the medial and lateral canthal ligaments. The optic nerve sheath was transected as far caudally as possible, as well as the retrobulbar musculature.

For the first 24 hours following surgery, gauze packs, drains, or both, were put temporarily in the animal's orbit. Next, using Vicryl number 2-0, a simple interrupted suture form was used to close the skin incision.



Figure 6: Enucleation of Cancer Eye in cross breed Cow.

A (Animal at presentation and bulged eye on the right figure), B (Clipping surgical site), C (Administration of anesthesia), D (Tarsorrhaphy in progress), E (Circumferential skin incision), F (Canthotomy), G (Gently rotating and tracking globe to detach from retrobulbar muscle), H (Clumped and dissected ophthalmic vessels, optic nerve, and retractor bulbar muscles), I (Closed wound by horizontal mattress) and J (Seven days later).

Post-operative care

After the procedure the cow was followed for 14 days under different management of antibiotic therapy by Penstrip 10ml, IM, daily for five days (procaine penicillin 24mg/kg and dihydrostreptomycin sulfate 30mg/kg), Dexamethasone sodium phosphate 4mg/ml, one, ampule, IM, daily for three days (manufactured by SAKAR Healthcare Pvt. Ltd., Gujarat India) as an analgesic and impregnated 15cm sterile gauze was changed at day 3, and 5 days post.

Moreover, the owner was advised to keep his cow in a confined area for several days after surgery to allow appropriate hemostasis and healing to occur. Daily observation of the surgical site and assessment of general well-being was performed until suture removal which was removed in 14th days after complete healing of the skin.

Conclusion

Even though, eye enucleation poses complications like failure or inability to remove all neoplastic tissue, massive intra-orbital hemorrhage, abscess formation, excessive dead space, and failure to appose the skin margin without excessive tension on sutures (relieving sutures may help) (Weaver, 2005), it remains a feasible, simple, inexpensive option of treatment for many types of severe ocular pathology. Additionally, it has the potential to resolve chronic pain, infection, and neoplastic disease. It can be performed with routine restraint and surgical equipment at minimal cost to the client. Post-operative complications of the operative site are minimal. Retention within the herd is based largely on owner preference and the value of the animal. The majority of the time, the tumor is found in Hereford, Holstein, and Simmental cattle breeds; it most frequently affects cattle between the ages of 3 and 7; and it is not sex-predisposed (Karakurt et al., 2021).

In line with the above findings, the current case was handled by trans-palpebral enucleation of the cancer eye and successfully recovered without any complication. Therefore, we recommend the enucleation for similar cases as the best and cheapest surgical approach in open-field animal health services with local anesthesia.

3.7. Open Wound Management Due to Hyena Bite in Jenny

Abstract

An eight-year geriatric Jenny was presented to the Addis Ababa University, Donkey Sanctuary Veterinary Clinic following a hyena bite over the posterior body part which was traumatized in the form of avulsion of the skin including the dermis and fascia of the upper quarter part of the hind limb bilaterally. The wound edges were irregular, and wide and lacked skin over large parts to close. Based on observation and clinical examination the cause was diagnosed as an avulsion type of open wound and was managed as open wound management. After preparing the surgical site, the devitalized tissue and lacerated irregular edge of the hanging skin and proud flesh were debrided after infiltration of epidural anesthesia to the animal. Finally, the wound edge was pasted with Zinc oxide cream by a gloved hand and the animal was sent home.

Keywords: *Hyena Bite, Jenny, Open Wound*

Introduction

Pack animals, specially, donkeys are economically very important animals in our country. The low-level development of the road transport network and the rough terrain of the country makes the donkey the most valuable, appropriate, and affordable pack animal under the smallholder farming systems of Ethiopia. Wounds of different forms are among one the common health concerns to afflict working donkeys in many countries (Dese, 2020). Similarly, the study on a donkey in Ethiopia has demonstrated that back sores and other wound forms are the most commonly observed health problem and the potential cause of equine wounds are almost endless: punctures from a sharp object like metal and glass; shear wounds from barbed wire sticks; collision injuries from falling or running into the object, horn thrust and hyena bite. In addition to mechanical injuries due to inanimate objects such as car accidents, kicks, and hyena bites are also common resulting from minor lacerations to deep avulsion on exposed body parts especially in developing countries where management is poor, especially at night. As a result, equine ambulatory practitioners typically see a relatively large number of cases presenting for wound care. Enormous variation exists in treatments, medications, bandages, and bandaging techniques applied to wounds in horses

and donkeys. The current case briefly describes the open wound management of hyena bite in donkey (Jiregna, 2019).

Case history and clinical examination

An eight-year-old local breed female donkey was presented to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, Addis Ababa University specifically, Donkey Sanctuary Veterinary Clinic by her owner Mr. Sisay Kasahun, since it was bitten by a Hyena over the posterior body part (Figure 7: A) during the night around eight hours before admission to the clinic. The donkey was traumatized in the form of avulsion of the skin including the dermis and fascia of the upper quarter part of the hind legs and a few parts of the perineum characterized by deep lacerations and few contusions to the lateral thigh. The wound edges were irregular and wide to estimate (close) but almost fresh (Figure 7: A).

Even though the wound bilaterally affected the superficial part of the hamstring muscle (semitendinosus, semimembranosus, and some part of bicep femoris) the jenny stood by itself and was able to walk without any locomotory problem during the presentation. The physical examination parameters were examined. Accordingly, the temperature, respiratory rate, heart rate, and pulse rate were 38.6° C, 16 breaths/min. 54 beats/min and 52/min respectively. All were within physiological limits. The mucous membrane was pink. Its weight was estimated as 200kg. Depending on clinical examination the cause was diagnosed as an avulsion type of open wound and was managed as open wound management as follows (Figure 7: B).

Surgical correction and treatment

Treatment started after physical restraining and stabilizing of the animal with the hair surrounding the periphery of the wound was clipped and washed with water and soap. Then, Jenny was physically restrained by lifting one of his forelimbs and keeping it in a hung position by his owner. Since the donkey was desensitized by injection of epidural anesthesia lidocaine hydrochloride 2%, 2ml, (1ml/100kg body weight) and the operation was conducted in a standing position.

After preparing the surgical site, the wound was thoroughly irrigated with normal saline to remove all dirt, and loose and devitalized tissue was trimmed off (Figure 7: B). Since there

was the loss of part of the tissue and it was wide to close, it left an open wound and will heal through the second intention of wound healing. Finally, the peripheral area of the wound was pasted with Zinc oxide (Figure 7: C and D). After finishing the procedure the jenny was sent home.

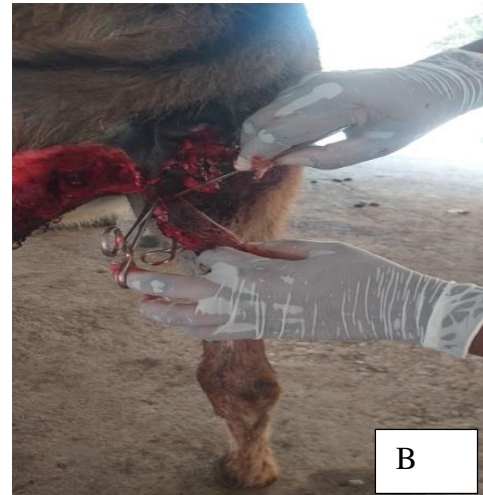
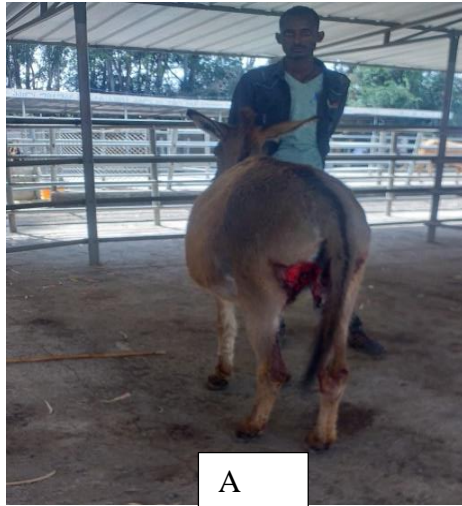


Figure 7: Open wound management in Jenny due to Hyena bite.

A (Animal at presentation with a perineal wound in Donkey Sanctuary Veterinary Clinic), B (Debridement of irregular and devitalized tissue), C (Application of the Zinc oxide slightly from the edges of to the center), D (Wound appearance at the end of the procedure).

Post-operative care and outcome

The wound was regularly debrided, lavaged, and dressed frequently with antiseptics until nearly healed leaving a narrow scar of connective tissue at the affected part after two months. The donkey was administered penicillin (24mg/kg) and dihydrostreptomycin sulfate (30mg/kg) (Pen & Strep® Norbrook UK), IM for three days. The wound was applied fly repellent by using sterile Vaseline at the wound periphery. The owner was also advised to maintain the cleanliness of the surgical site from contamination. In addition, the owner was advised to inspect the overall discomfort and status of the wound in addition to providing well-built shelter for his animal which is wild animal proof. Finally depending on the phone communication the donkey was successfully healed and given birth after three months of hyena bite and management. Phone calling was preferred due to the location of the owner and every wound management was conducted at the nearby veterinary clinic by veterinarians.

Discussion

The current case at hand is characterized by a wide area and avulsion type of wound in which the wound was difficult to close and only intended to be managed as an open wound for second-intention wound healing. To some up mechanical injury to the integumentary of a donkey; particularly hyena bite of kin and associated structure is one of the clinical conditions encountered in veterinary practice. However, hyena bites can be managed by different methods; either in open or closed methods of wound management. In the present particular case, a hyena bite in the form of avulsion was brought to the clinic managed in the form of open wound management, and finally healed leaving scar tissue (Jiregna, 2019). The current case was managed by similar techniques.

3.8. Orchidectomy of Congenital Ectopic Testicles in Local Breed Bull

Abstract

In the current report, a 6-year-old bright red local breed bull was brought on May 3, 2022, GC, to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital with good body condition but testicles unlike other ox attached under the abdomen since birth, the owner waited for a long time as hope it may be corrected by itself. However, the ox testicles are still visible under the abdomen and growth horizontally to the prepuce. The owner added up the reduced feeling of mating with a female cow and the owner requested to be corrected for him. Up on detailed clinical examination, ectopic testicles were observed under the ventral abdomen lateral to the prepuce bilaterally. Moreover, the testicles can be moved in subcutaneous skin freely and exist out of the scrotum. The two testicular sacs were hung at the normal anatomical location without testicles. The problem was diagnosed as an empty scrotum or ectopic testicle. The other vital parameters were normal and the bull can withstand surgical correction of testicular ablation. Therefore, an open castration (a bilateral complete orchidectomy) was performed to remove both testicles under xylazine sedation and local infiltration analgesia. Both testicles were removed safely and the animal recovered without any apparent complications.

Keywords: *Bull, Ectopic Testicles, Open Castration*

Introduction

Abnormal areas of the testicle are rarely neutralized, making the animal susceptible to surgical excision. Open castration of bulls for meat production is common practice in many countries. This reduces management issues related to aggressive and sexual behavior, and the incidence of dark trimmings is lower in steers than in intact bulls. The most common techniques are surgical removal of the testicles (orchidectomy), bloodless castration by squeezing the spermatic cord and stopping blood flow to the testicles with a Burdizzo clamp, or a rubber ring attached to the neck of the scrotum to remove the testicles. is a way to stop the blood flow Besides control practices in cattle production, there are other pathological conditions for which open castration is recommended. Neoplastic growths, chronic orchitis, irreversible damage to the testicle or scrotum, and orchitis gangrenosum are common

indications of radical orchidectomy in pets. In addition, ectopic testicles (abnormally positioned testicles) are less common than undescended testicles, a congenital condition in which the testes are not descended into the scrotum. Instead, the testicles are found subcutaneously near the foreskin or anywhere along the leg (Gadelkareem *et al.*, 2020).

Case history and clinical findings

A six-year bright red local breed bull was brought to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital with good body condition but testicles unlike other ox attached under the abdomen since birth, the owner waited for a long time as hoped it may be corrected by itself. However, the ox testicles are still visible under the abdomen and growth horizontally to the prepuce. The owner added up the reduced feeling to mating with a female cow and the owner requested to be corrected for him. Up on detailed clinical examination, ectopic testicles were observed under the ventral abdomen lateral to the prepuce bilaterally. Moreover, the testicles can be moved in subcutaneous skin freely and exist out of the scrotum. The two testicular sacs were hung at the normal anatomical location without testicles. The problem was diagnosed as an empty scrotum or ectopic testicle. The other vital parameters were normal and the bull can withstand surgical correction of testicular ablation.

Treatment and outcome

After verification of the bull, it was determined to be restrained manually by the owner and chemically sedative and local nerve blocker. With all four legs are tied together in front and the hind legs are stretched forward to make the testicle more accessible through the back to keep its lateral recumbency. Then, a single injection of xylazine at a dose of 0.01mg/kg was administered intramuscularly. Next, the caudal midline abdomen from the scrotum to the level of the cranial preputial cavity on both sides lateral to the penis is clipped and aseptically prepared as indicated below (Figure 8: B). Then, 10ml of 2% lidocaine was infiltrated intratesticular to ectopic testicle by grasping in one hand to achieve local analgesia, as shown in (Figure 8: D) below.

Then, after grasping the dorsal ectopic testicle horizontal skin incision was placed directly over the testicle and subcutaneous tissues to push it out through the incision as indicated in

(Figure 8: E) below. The testis was squeezed out through the incision and other soft tissues were tract back by hand as shown in (Figure 8: F) below. Then, the parietal tunic vaginally was incised, and vascular and avascular parts were separately ligated by three forceps placed on the cords (Figure 8: G). Next, two transfixion ligatures were placed between forceps and dissected over the cranial forceps. After that, the stump was checked for active bleeding and put back in place.

Since the place was not the right place to leave open, herniation of viscera and to avoid dead space, internal tissue was closed by vicryl 3-0 for by simple continuous suture pattern and skin was closed by subcuticular suture pattern by vicryl 2-0 size (Figure 8: H). The second testicle was removed by the same technique and both incision sites were closed and scrubbed with iodine solution (Figure 8: I and J) below.

As of post-operative care and follow-up, in addition to local infiltration of procaine penicillin powder at the surgical site systematically 10ml of Penstrip (procaine penicillin 24mg/kg and dihydrostreptomycin sulfate 30mg/kg body weight) was given to the bull daily for three days. Moreover, the owner was advised to keep his bullock out of the female cow for one month and rest until the wound completely healed. After seven days the skin suture material was removed and the bullock was checked for the final time. No postoperative complications were observed during the follow-up time.

Conclusion

As far as I know, ectopic testicle in cattle especially in Ethiopia which was corrected by open castration is the first of its type, and successfully managed and reported.



Figure 8: Orchidectomy of Ectopic testicles in local breed Bull.

A (the white arrow indicates subcutaneous testicle lateral to the penis), B (clamping the ventral part of the caudal abdomen), C (cleaned and scrubbed surgical site), D (Infiltration of a local anesthetic to testicles, subcutaneous tissue, and rectus abdominis muscle), E (Skin incision), F (Exteriorized testicle from subcutis), G (trans-fixation by three forceps), H (Closure of subcutaneous tissues to avoid dead space), I (Completed closure bilaterally) and J (Scrubbed surgical site after the procedure).

3.9. Tenorrhaphy of Disrupted Achilles Tendon in Hind Limb of Sheep

Abstract

On May 11, 2022, GC, a 1-year-old black local breed female sheep was admitted as an emergency case by her owner to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, with a history of direct wire trauma on the left hind limb of his sheep around eight hours ago, while it was trying to escape from the attendant over the wire fence, after that the animal was dragging the left hind limb while moving. On physical examination of the affected limb, it was flaccid, unable to bear weight on its side, luxation of the Achilles or calcaneal tendon and sharp superficial skin incision were observed. Apart from this, all vital parameters were found in the normal range. After closely inspected the animal was taken to the operation room of a small ruminant unit at the hospital for emergency surgery. Then, effective Tenorrhaphy of the luxated calcaneal tendon was done for the ewe under local anesthesia by number eight like going through the loose tendon multiple times until the tendon made a straight line with a hook. Then, subcutaneous tissue and skin were closed. Finally, the limb was immobilized by a bandage and locally available flat table trees were prepared before the case was handled. Then, the sheep were taken home by Baggage. Under strict follow-up for about two weeks through bandage changing and modification, antibiotic therapy for five days, advising the owner, and visiting the animal at home surprisingly brought successful recovery.

Keywords: *Achilles tendon, Luxation, Sheep, Tenorrhaphy*

Introduction

Tendon diseases are common in human and veterinary medicine, have high recurrence rates, and are poorly treated (Groth *et al.*, 2017). The most common tendon and ligament injuries in horses are on the volar or plantar side of the distal limb. Observation of the extremity prior to palpation provides important information about damaged structures (type and location of swelling) and severity of injury (changes in extremity posture and function). Ideally, the limbs should be prepped by clipping hair from the palms of the hands and feet (Smith and Ecv, 2008).

Direct trauma can tear the gastrocnemius tendon adjacent to the insertion of the calcaneal tubercle. Bovine flexor tendon ruptures can be successfully treated with Tenorrhaphy and external grafts or external grafts alone. The financial costs associated with treatment and long-term recovery should be discussed with the owner before starting treatment (Anderson, Desrochers and Jean, 2008). Treatment of Achilles tendon rupture has both surgical and non-surgical advocates and remains controversial to this day. Surgical treatment is the method of choice for athletes and young people, although there are advocates for non-surgical treatment. Non-surgical options are not recommended for active patients due to their high re-rupture rate and low final dose. The main goal of treating Achilles tendon ruptures is to avoid tendon lengthening, which cannot be achieved with non-surgical treatments (Yrldmrn and Esemenli, 2015).

Surgical attachment of tendon fibers to aid healing followed by immobilization of the extremities in casts was primarily performed. The prognosis was assessed between favorable and severe, and several variables were identified that directly influence long-term outcomes. These include the degree of soft-tissue damage associated with the trauma (because extensive damage can lead to the impaired blood supply to the distal tip), the location of the lesion (because healing within the synovial sheath is delayed), and whether synovial sepsis is present. Affects tendon healing. Reported complications include surgical repair failure under load before adequate tensile strength is restored and adhesion formation. Then close the subcutaneous tissue and skin. Usually, a small longitudinal suture incision must be made in the skin distal to the repair site to aid drainage. Stitching alone is usually sufficient without the need for a drain. Casting is the most ideal adjustment method for tendon ruptures after primary repair (Sullivan and Acvs, 2007).

Case history and clinical findings

Mr. Habtamu Taddela brought one-year-old black local breed female sheep (Ewe lamb) to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, with a history of direct wire trauma on the left hind limb of his sheep last night while it was trying to escape from over the wire fence, after that the animal was dragging the left hind limb while moving

(Figure 9: A). The owner had another flock of sheep which were kept under semi-intensive management at the yard.

Upon thorough physical examination, the affected limb was flaccid, can bear weight on the left hind quarter, luxation of the Achilles or calcaneal tendon, and sharp superficial skin incisions was observed. Apart from this, all vital parameters were found in the normal range. After closely inspected the animal was taken to the operation room of a small ruminant unit at the hospital for emergency surgery.

Surgical management

After verification, the Ewe was sedated and the surgical area was shaved, cleaned, and scrubbed for skin incision after being locally infiltrated by 2% Lidocaine hydrochloride (Figure 9: B). Then, a skin incision was placed longitudinally over the affected tendon from the cranial part of the calcaneal tendon to the tarsus protrusion in the dorsal part of the fibula and tibia (Figure 9: C). Next, the exposed Achilles tendon was re-examined by grasping the limb in one hand and flexing the luxated tendon to its original alignment with a hook. The skin was retracted back bluntly and the whole affected tendon was grasped between two hands to check the maximum flexion to be corrected (Figure 9: D). After flexing the affected limb dorsally by the holder, tenorrhaphy of the luxated tendon started by peripheral to central passages of vicryl 3-0 size absorbable suture material multiple times until the tendon supports the flexion of the limb caudally. The extension and flexion of the affected limb were re-assured before subcutaneous and skin closure (Figure 9: E). Finally, procaine penicillin powder was infiltrated into the wound and subcutaneous tissues and skin were closed by one layer using vicryl 2-0 size by the vertical mattress to withstand the pressure from flexion (Figure 9: F). After all, immobilization of the hook joint of the affected limb was achieved by impregnated cotton wrapped in sterile bandages, and locally prepared flat table trees were used as casting material for about fifteen days through changing and modifying as needed (Figure 9: H). As of post-operative care antibiotic Penstrip 2ml, intramuscularly was given for five days and the bandage was checked to be changed or modified every other day. After, 15 days of post-operative follow up the animal recovered completely and was able to bear its weight as a normal animal as shown in the (Figure 9: K) below.



Figure 9: Tenorrhaphy of disrupted Achilles tendon in Sheep.

A (Animal with flaccid leg), B (site preparation by shaving), C (longitudinal skin incision), D (Re-examination of the alignment of the tendon to its original angle), E (Tenorrhaphy of Achilles tendon), F (Completed suture like figure eight), G (Subcutaneous tissue and skin closure on progress), H (Immobilization by a bandage), I (wounds after seven days), J (completely healed wound with hair after fifteen days of suture removal) and K (Good animal).

Discussion

Direct trauma can tear the gastrocnemius tendon adjacent to the insertion of the calcaneal tubercle. Bovine flexor tendon ruptures can be successfully treated with Tenorrhaphy and external grafts or external grafts alone. The financial costs associated with treatment and long-term recovery should be discussed with the owner before starting treatment (Anderson, Desrochers, and Jean, 2008). Similar to the case above, this case was also successfully recovered from sheep, not cattle. Except for the species considered, this report follows the above principles.

Observation of the extremity prior to palpation provides important information about damaged structures (type and location of swelling) and severity of injury (changes in limb posture and function). Ideally, the limbs should be prepped by clipping hair from the palms of the hands and feet (Smith and Ecv, 2008). As explained above, our case was clinically diagnosed using the same principles and approaches.

A small longitudinal suture incision should then be made through the skin distal to the repair site to close the subcutaneous tissue and skin and aid in drainage. Stitching alone is usually sufficient without the need for a drain. Casting is the most ideal adjustment method for tendon ruptures after primary repair (Sullivan and Acvs, 2007). The present case was treated with similar management during preoperative and postoperative follow-up.

In conclusion, our case was successfully treated and fully reintegrated into the herd under normal stress without complications after 15 days of rigorous postoperative follow-up.

We, therefore, recommend tenorrhaphy for Achilles tendon ruptures as the best and most acceptable method of tendon healing in small ruminants, especially in moderate-weight sheep and goats.

3.10. Traumatic Wound on Metacarpal Area of Bull

Abstract

On 13th June 2022 GC, Mr Tolesa Bayisa a 4 year Holstein Freesia bull was brought to Addis Ababa University, College of Agriculture and Veterinary Medicine Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, with a traumatic lacerative wound on its forelimb metacarpal tissue and skin. The owner used his bull for drought purposes and needed to be supported. The wound was found to be a lacerative type and successfully treated by closed wound management under local anesthesia and post-operative follow-up with antibiotics.

Keywords: *Bull, Close wound management, Forelimb*

Introduction

Wounds of variable shapes, lengths, locations, depths, and ages are invariably encountered by bovine practitioners (Mulon, 2020). The foot and pastern regions are particularly susceptible to trauma because of their distal location on the limb. Lacerations and avulsion injuries are often caused by barbed wire, kicking at or stepping on sharp objects, or as the result of the foot becoming entrapped (Brogniez *et al.*, 2012).

Wounds on the distal limb are not uncommon considering the presence of sharp objects in the environment. The time elapsed between their occurrence and detection varies greatly depending on the product type and the housing of the animals. Due to the lack of soft tissue protection in the distal limb, joints, and tendon sheaths can be penetrated and contaminated. Evaluation of the wound often necessitates restraining the animal in lateral recumbency. Anesthesia of the distal limb can be performed by regional limb perfusion using 2% lidocaine before the exploration of the wound and determination of the contamination of the synovial structure (Mulon, 2020).

Distal extremity wounds in horses are common, accounting for over 60% of all wounds. These wounds are close to the ground, which increases the risk of contamination and subsequent infection, and the skin on the distal extremities is less vascularized than the skin on other parts of the horse's body. It is often more of a problem than a scar in a spot (Schumacher *et al.*, 2017).

Unless the wound occurrence has been witnessed and is addressed within 6 to 12 hours, managing them by second intention under aseptic bandages allows the drainage of the synovial fluid until the achievement of the control of the infection (Mulon, 2020).

Case history and clinical findings

A four-year-old Holstein Frisian bull was presented to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, with a mechanical injury on its right fore limb which was cut by sharp metal three hours before admission to the hospital. The bull presented with a blood-contaminated cloth-wrapped wound on its right forelimb metacarpal skin and tissues (figure 10: A). There was excessive bleeding that need to be considered as an emergency. The other vital parameters were found normal except for slight bleeding from the metacarpal arteries and veins.

Surgical management

After restraining the bull physically in lateral recumbency by keeping the affected limb upper to access easily, the wound was lavaged and clipped and the affected unviable tissue was trimmed off under local anesthetic blockage of radial nerves. Since the wound was fresh and lacerated viable skin to close was possible, it was managed to be closed by two layers, one soft tissue suture together and skin with its fascia closed alone by simple interrupted suture pattern by vicryl 2-0. Then, scrubbed and systematic antibiotics (Penstrip 20ml, IM,) were prescribed for it daily for three consecutive days. After five days the animal was come to hospital for suture removal and found completely healed without any complication.



Figure 10: Lacerative wound management by primary healing in Holstein freesia Bull.

A (Animal at presentation with wounds on the leg), B (Wound check-up by removing the dirty cloth from it), C (Red area indicates wound location), D (Shaving for site preparation), E (Closure of wound), F (After completing the procedure the wound apposed by simple interrupted suture pattern and scrubbed by iodine solution).

Discussion

Unless the wound occurrence has been witnessed and is addressed within 6 to 12 hours, managing them by second intention under aseptic bandages allows the drainage of the synovial fluid until the achievement of the control of the infection (Mulon, 2020). The current case was a fresh wound of 3 hours with less contamination and closed to be healed. Distal extremity wounds in horses are common, accounting for over 60% of all wounds. These wounds are closer to the ground, increasing the risk of contamination and subsequent infection, and because the skin on the distal extremities is less vascularized than the skin on other parts of the horse's body. , are often more problematic than scars elsewhere (Schumacher *et al.*, 2017). Like the above horse case, the current case also involves the lower limb of the bovine and is caused by a metal sheath that create sharp laceration.

3.11. Surgical Correction of Vaginal Prolapse in Bovine and Its Management

Abstract

On 30th June 2022 GC, an 8 years old Holstein Freesia cow acquired organ prolapse with a history of recent calving at Mare dairy farm in Bishoftu, Ethiopia. The owner requests the treatment of his animal by calling me on the phone at noon time. The animal was visited as an emergency response to the phone and the case was diagnosed based on the history and physical observation of the animal at the farm. On physical examination, it was found to be a third-degree vaginal prolapse with no systemic illness involvement. The prolapse was therefore manually corrected under epidural anesthesia. The cow recovered without any apparent complications.

Keywords: *Bovine, Vaginal Prolapse, Purse String*

Introduction

Genital prolapse is a common reproductive disorder in cows and buffaloes. It is considered an emergency condition that should be managed immediately to avoid complications i.e. edema, trauma, contamination, and fatal hemorrhage. The condition is sporadic in occurrence and easy to diagnose yet its management is not easy, especially in protracted cases. Several predisposing factors responsible for vaginal prolapse can be listed as, atony due to hypocalcemia, open cervix, slack pelvic ligament, and abdominal straining (Kumar *et al.*, 2018). A caudal epidural block using lignocaine hydrochloride (2%) was effective in controlling straining and provided satisfactory regional analgesia. It was induced using 2% lignocaine hydrochloride (5 to 10 mL) as a caudal epidural block. For easy replacement of the prolapsed mass, straw-filled gunny bags were placed beneath the hind quarters of all the cows. The prolapsed mass was rinsed thoroughly with cold (<15 0C) potassium permanganate solution (1:1000), ice packs were applied, it was lubricated with sterile Vaseline, followed by massaging and replacing carefully after holding it up with lubricated gloved hands and pushing it into the cow's pelvis. During repositioning, rotation of the uterus was avoided. The entire perineal region including the vulvar lips was disinfected with 70% alcohol. A modified Buhner's technique, using sterile infusion set tubing as suture material, was effective in the retention of the mass in all the cows. Complications and

disfigurement of the vulvar area were not noticed, even in cases where the suture was kept in situ for a prolonged period (Bhattacharyya *et al.*, 2012).

Case history and clinical findings

An 8-year-old Holstein Friesian cow acquired organ prolapse with a history of recent calving at Mare dairy farm in Bishoftu, Ethiopia. The owner requests the treatment of his animal by calling me on the phone at noon time. Then, the animal was visited as an emergency response to the phone and the case was diagnosed based on the history and physical observation of the animal at the farm. All vital signs were under normal range. After a thorough obstetrical examination, the case was graded as a three-degree vaginal prolapse. The vagina was inverted up to the cervix, the cervical Os was visible at the tip of the prolapse.

Treatment and outcome

The animal was treated with a single injection of long-acting antibiotic (Oxytetracycline 20% 1ml/20kg, IM) and anesthesia was achieved by epidural injection of 5ml 2% lidocaine. The cow was held standing in a crush. The vagina was cleaned with normal saline. Hypertonic saline solution was applied to reduce the edema. Then the prolapse was corrected manually by pushing the vagina inside gently. A rectal examination was done to check the cervix was in place. Once the prolapse was corrected a curved traumatic needle was threaded with 4 folded 3 No. silk. The needle was punctured subcutaneously from one side of the vulvar lip cm away from the vulvar margin and 1-2 cm dorsal to the ventral commissure) in an upward direction without piercing vulvar mucosa and passed through the mid area at the dorsal commissure between the anus and vulvar opening. The needle was reinserted through the same hole at the dorsal commissure and passed subcutaneously into the other vulvar lip in a downward direction. The needle was taken out through another hole which was at the same level and equal distance from the hole of the corresponding vulvar lip. Thus the free ends of the thread came out through two openings near the ventral commissure. A slip knot was applied and tied firmly to create a gap for urination between the knot and the ventral commissure. The sutures were removed after five days and the cow recovered without apparent complications. The prolapse did not recur in the follow-up time.



Figure 11: Vaginal prolapse in the Cow.

A, B (cow with the prolapsed vagina), C (Administration of epidural anesthesia), D (Cleaning in progress), E (Debridement of devitalized tissue), F (Replacement of the organ in progress), G (Completely replaced), H (Buhner suture pattern after replacement).

Discussion

Vaginal prolapse in cows is often a chronic, recurrent, hereditary prepartum disease, whilst uterine prolapse is nonhereditary and mostly associated with hypocalcemia or forceful fetal extraction. Uterine prolapse is a very painful and serious condition due to which most animals cannot remain standing for long. Animals suffering from uterine prolapse either remain in sternal or lateral recumbency. Vaginal prolapse is comparatively less serious and therefore such animals usually remained standing or were easily persuaded to stand (Bhattacharyya *et al.*, 2012). The current case was managed successfully as an emergency and the animal was recovered without any complications.

3.12. Surgical Management of Extensive Oral Tumor in Dog

Abstract

A four-year-old cross-breed dwarf Bitch was presented with a history of oral growth, bleeding, excessive salivation, bad breath, inappetence, and dysphagia. Physical examination revealed cauliflower-like reddish growth in the gingiva enclosing the mandibular incisors and canine tooth. The routine surgery was performed to excise the tumor mass. The dog recovered uneventfully after surgery with no difficulty in feeding liquid and semisolid diet. The post-operative prognosis for dogs with oral neoplasia depends on the type of tumor and extent of disease at the time of surgery. In the above case, the tumor was benign and rostral mandibulectomy provided an excellent prognosis and recovery with no recurrence of the tumor. However, it was not economical and unadaptable for the current case, instead reliving surgery was done for the bitch.

Keywords: *Bitch, Extensive oral tumor, surgical excision*

Introduction

Oral cancer is more common in dogs, but less common in cats. No anatomical area is susceptible to such a wide variety of cancers that respond so differently to treatment. Preoperative biopsy and accurate staging are essential for proper treatment. Although most oral cancers are treated surgically, radiation has a limited but clear role in the treatment of radiation-sensitive cancers, terminal diseases, and postoperative residual diseases. Keys to long-term remission include 1) Diagnosis at an early stage (low dose). 2) Aggressive surgical excision at this stage is often curative. By bone removal, it is possible to resect a wide range of cancers in the lower and upper jaws (Babu and Prabhakar, 2016).

Although the rate of distant metastasis is relatively low for both tumors (unlike that of oral malignant melanomas), local invasion into the underlying bone is frequently documented regardless of tumor location in the oral cavity and local tumor recurrence (up to 58%) is thought to be a major cause of treatment failure. Therefore, aggressive local treatment is important in the successful management of patients with nonmelanotic oral malignancies. Radical surgical excision (i.e., mandibulectomy or maxillectomy) constitutes the treatment

of choice, to incorporate a minimum 1-cm margin of grossly normal tissue surrounding the mass. The rostral aspect of the oral cavity appears to be a predilection site for SCC in dogs, and wide-margin excision of smaller masses in this location may be achieved without compromising function or cosmesis. However, wide-margin excision of tumors that are larger or that are located more caudally in the oral cavity may be limited by anatomic constraints. Extirpation of the local lymph nodes for which metastasis is evident has also been advocated (Riggs *et al.*, 2018).

Case description

A 20kg dwarf cross breed dog was brought to Addis Ababa University, College of Agriculture and Veterinary Medicine Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital by her owner, with a history of oral growth, gradually increasing in size and the Bitch unable to take feed through mouth currently since the mass full the mouth. The owner had brought his animal two years ago with the same growth on the mouth and was treated by the surgery students. However, the animal acquired the same problem as time passed. Up on Physical examination reddish mass, firm, irregular, cauliflower-like growth on the lower mandible and gingiva, enclosing the incisors and canine tooth were revealed as indicated in (Figure 12: A) below. The case was diagnosed as an oral tumor most probably sarcoma with a poor prognosis of totally remove. Even though the risk of relapse was known, the animal was approved for surgical excision of the tumor as far as possible without mandibulectomy.

Surgical procedure

Before commencing surgery the dog was sedated by a combination of Ketamine chloride 10mg/kg and Diazepam 1mg/kg and the hairs around the mouth were clipped, the mouth area was scrubbed and the other part of the bitch was covered by a drape. Then, the induction with a half dose of the above combination was given IV (intravenously). Next, the tumor was ligated by 2-0 Vicryl and grasped by one hand incision started from inside to outside after the mouth was opened by the tie, and the passage to the esophagus was plugged by sterile gauze to prevent swallowing of blood from the incision as indicated in figure 12: B below. Then, the tumor on the outer part of the mouth on the gingiva was removed with two rudimentary incisors which were firmly attached to the tumor and invisible while

incising it as shown below (Figure 12: C). Finally, the two canine teeth were freed and the animal was able to close its lower lip as in (Figure 12: D). After all procedures were completed the animal was sent home in a box with her owner and followed by antibiotic therapy for three days as shown in (Figure 12: E) below.



Figure 12: Surgical Management of Extensive Oral Tumor in Bitch.

A (Dog with oral tumor), B & C (Surgical Excision in progress), (Completely closed mouth post-operatively with recovering animal), E (Animal in the box to be taken home in comfort).

Discussion

The treatment protocols for oral tumors are based on the tumor type, size, extent, the patient's age, and treatment limitations. Extensive and invasive gingival oral tumors require aggressive therapy like mandibulectomy and maxillectomy before metastasis, for a better chance of success. If osteotomy is performed caudal to second premolar bilaterally, prehensile dysfunction and drooping of the tongue may occur after bilateral rostral mandibulectomy, which is due to a lack of support at the base of the tongue. The dogs should be hand fed post-operatively to adapt themselves to the new prehensile function of the tongue. An uneventful recovery of the above two cases after surgery, without any major complications was noted (Babu and Prabhakar, 2016).

The current case was the same as the two above cases in every aspect except the surgical removal of the tumor was not complete as was needed ectomy of the lower part of the mouth which may need new feeding adaptation and challenges for the animal and owner to feed it. Considering the cost and availability of material mandibulectomy was not done instead deep tumor excision with the tooth was carried out successfully. After three days post-operative follow up the animal was started to feed itself. Unlike the above complication, our case was not challenged, but it may recur in the future.

3.13. Tenotomy of Flexural Deformity or Fetlock Knuckling in Calf

Abstract

Congenital flexor tendon contracture of the forelimbs is one of the most common musculoskeletal abnormalities in newborn calves. In the current report, a 6-day-old Holstein Friesia calf with contracted metacarpophalangeal joint or fetlock knuckling was presented to Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital by her owner from his small-scale dairy farm found in Bishoftu town, Ethiopia. Up on clinical examination, the calf was unable to bear weight in the forelimb, excessive flexion of fetlock joints in both limbs, walk on the dorsal pastern, and sometimes kneel to move on the ground up on moving. Based on the history and clinical observation, the case was diagnosed as congenital flexural deformity of fetlock joints or knuckling of fetlock in the calf. Then, the owner consented to allow his calf to be managed under anesthesia for the tenotomy of the affected tendon. Then, Z-Tenotomy was selected for elongation of the contracted superficial digital flexor tendon and successfully performed. The affected limbs were supported and joints were immobilized by bandages.

Keywords: *Calf, Knuckling, Plaster of Paris, Z-Tenotomy*

Introduction

Congenital flexor tendon contracture of the forelimbs is one of the most common musculoskeletal abnormalities in newborn calves. This change may manifest in mild, moderate, or severe forms. Mild and moderate illness can be treated with drugs and physical therapy. However, in severe cases, the symptoms are complicated by secondary lesions in calves, and difficulty in feeding, and surgical intervention is required in most cases (Centro and Salado, 2021). It often affects the metacarpophalangeal or metatarsophalangeal joints within the first 1-2 weeks of life and is a common defect in many breeds of cattle. Possible causes include nutrition in the uterus, misalignment, and the fetus being too large for its mother. In general, calves with flexion deformity cannot suckle and therefore risk passive transmission of immunity failure. Chronic deformities can lead to skin ulcers and subsequent septic arthritis. Both may be factors influencing treatment success, including etiology (Leech, 2022).

Case history and clinical examination

On February 02, 2023, GC, a six (6) day old newborn female calf was brought to Addis Ababa University, College of Agriculture and Veterinary Medicine Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital by Mr, Engidu Damisse from his small-scale dairy farm found in Bishoftu town, Ethiopia with something strange for his experience acquired by his animal. The calf was born six days ago with normal delivery through the vagina with good body condition but, unable to stand by its forelimb to suck her dam since birth. He informed the staff of our college by phone and tried to correct the case by external coaptation to extend the limb with bandages, but it was unsuccessful to correct the problem through that. After the home management failed the owner brought his calf with dirty Plaster of Paris (POP). Up on clinical examination, the calf was unable to bear weight in the forelimb, excessive flexion of fetlock joints in both limbs, walk on the dorsal pastern, and sometimes kneel to move on the ground up on moving. The hind quarter was normal and the animal was affected only in the forelimb. It was checked for other congenital anomalies related to this. Other systems and all vital parameters were normal. Based upon the history and clinical observation, the case was diagnosed as congenital flexural deformity of fetlock joints or knuckling of fetlock in the calf. Then, the owner consented to allow his calf to be managed under anesthesia for the tenotomy of the affected tendon.

Surgical procedure

Since the calf was friendly to be handled by the owner and assistant for preparation there was no need of sedating the calf before the surgery. Therefore, it was placed on the patient's table and the forelimb was aseptically prepared through shaving, washing, and scrubbing. Moreover, its limbs were wrapped and tourniquet with gauze distal to the site of the incision (Figure 13: B). Then, it was sedated with diazepam (manufactured by Intas Pharmaceutical Ltd., India) @ 0.5mg/Kg IM. Then local infiltration of analgesia was carried out at the medial side of the metacarpophalangeal joint by using 5ml of 2% lidocaine hydrochloride (2% lidocaine hydrochloride, jail pharma. co.Ltd. Korea). Next, the calf was restrained in lateral recumbence, and handled by assistants and animal owners.

Down the procedure, the area was scrubbed with povidone-iodine and a 6 cm longitudinal incision was made from the proximal metacarpal quarter to the middle of the metacarpal on the lateral aspect to avoid the medial palmar artery, just over the anatomical position of the superficial and deep flexor tendons (Figure 13:C). The superficial and deep fasciae were carefully approached to identify and avoid damaging the lateral palmar digital nerve and the palmar metacarpal arteries and veins. I proceeded to separate these structures to protect them and locate the superficial and deep flexor tendons. Subsequently, the superficial flexor tendon was elevated and extended with the aid of blunt forceps (Figure 13: E). Then, the elevated superficial digital flexor tendon (SDFT) was divided longitudinally into two equal parts from the crania to the caudal of its exposed area as shown in (Figure 13: G). Then one of the two SDFTs was in proximal and the other at distal of the former incision i.e., Z-Tenotomy was performed as shown in (Figure 13: I).

Next, anastomosis of the two opposite ends was performed by vicryl 3-0 suture material by horizontal interrupted suture pattern as indicated below in (Figure 13: J). Then, an extension was performed and improvement was evident, therefore, there was no need for further intervention on another structure. The area was hydrated with saline and antibiotic and the fasciae were closed with a 3-0-gauge synthetic absorbable suture in a continuous pattern. The skin was closed by an interrupted mattress (Figure 13: K). After that, the phalangeal and metacarpal region was lightly bandaged, a layer of cotton was spread and a splint was placed in the distal-plantar region, from the crown of the hoof to the proximal portion of the metacarpal, to aid joint extension (Figure 13: L). The same procedure was performed on both extremities. The animal showed improvement immediately in posture as indicated in (Figure 13: M) below. After all the animal was given antibiotics and sent home by the cart of the owner.



Figure 13: Tenotomy of flexural deformity or fetlock knuckling in Calf.

Description of figure 13 above: A (Animal with a contracted metacarpophalangeal joint of knuckling), B (Preparation of surgical site by shaving from proximal metacarpal to distal metacarpophalangeal joint in medial part), C (Skin incision over the affected tendon), D (Retracted back skin and fascia bluntly by finger), E (Superficial digital flexor tendon located and dissected bluntly by finger), F (SDFT elevated by blunt forceps), G (Dividing the exteriorized superficial flexor tendon longitudinally), H (Elevation of the divided SDFT by forceps for incision), I (Anastomosis of the opposite end after Z-incision), K (Skin closed by simple interrupted mattress), L (Immobilization of proximal and distal joints), M (Animal movement after the tenotomy).

Post-operative care and outcome

As soon as the surgery was completed the animal was administered antibiotics by using Oxytetracycline 10% (short-acting) 10mg/kg, intramuscularly, and continued for five consecutive days. Moreover, the bandage was not changed for three days for the first time and it was checked and changed after three days with little complication since the plaster of Paris created a wet environment. After that the wound was cleaned and wound spray was applied to it and the bandage was modified and changed every day for the next five days. Even though, the complication created some upsets it was resolved by strict follow-up of the animal and the owner also cooperated to improve management, pay for the cost of plaster of Paris and antibiotic wound spray to the affected hoof of the calve at home until the removal of the suture after complete healing after 15 days.

Discussion

A study was conducted on 6 calves with ankle movement of both front legs. A Z-tenotomy with cast fixation was performed on all calves. The skin sutures were removed 10 days after surgery to confirm recovery (Parashar, 2022). Our case was treated with exactly the same surgical technique and post-operative care, except that the animal's cast was not changed daily, but only after 3 days. The reason was the high cost of materials. This unilaterally resulted in postoperative complications such as surgical site infections and calf hoof problems. After that, daily washing, changing bandages, and wearing specially modified hoof boots on the affected leg will accelerate the healing of the wound over the next three days.

A study was conducted using oxytetracycline to treat calf flexor tendon contraction as a means of administering postoperative antibiotics, which restores normal hoof loading more than without oxytetracycline and was found to be slightly effective. In contrast, oxytetracycline infusion, which is used to treat calf flexor tendon contraction, does not affect weight bearing and has no significant clinical effect (Leech, 2022). In the present case report, the same drug was used and the animals received TAT (tetanus antitoxin) 15,000 IU/kg on day 5 of follow-up. In addition, owners were advised to hand-feed their calves with colostrum and milk until they fully recovered.

In summary, we recommend Z-tenotomy, casts, and oxytetracycline with strict follow-up as the best treatment for ankle injuries in calves and other animals.

3.14. Abscess Evacuation from Gluteus Muscle of Local Breed Bull

Abstract

In a recent case report, a bull admitted to the Fesseha Gebreab Memorial Veterinary Teaching Hospital on February 7, 2023, GC (Gregorian calendar) was successfully treated for abscess drainage. The abscess swelling was located subcutaneously on the dorsal surface of the deep buttock on one side of the left hind limb. Postoperative treatment of cattle consisted of regular drainage of pus, daily antiseptic dressings with iodine tincture, parenteral administration of antibiotics for 5 days, daily wound cleansing, and analgesic (dexamethasone) for 2 days. He recovered successfully 10 days after surgery with no further complications.

Keywords: *Abscess, Bull, Gluteus Muscle, Surgical Evacuation*

Introduction

Abscesses are foci of infection that usually develop when bacteria are injected through the skin from a contaminated object. Most subcutaneous abscesses result from traumatic skin penetration and associated infection. For example, subcutaneous facial abscesses are common in cows fed millet forage. Multiple animals within a herd may be affected simultaneously. Also, most abscesses are caused by bacterial infections. Bacteria, especially *Staphylococcus* species, are the most common cause of skin abscesses when they enter the body through hair follicles or through soil or wounds that puncture or break the skin occurs. Rarely, an abscess is caused by a virus, fungus, or parasite. Symptoms of an abscess depend on where the abscess forms in the body. However, detecting an abscess inside the body is more difficult. Symptoms of an abscess include redness, tenderness, pain, warmth (hotness), swelling (for abscesses near the skin layer), or constitutional symptoms (for deep abscesses) in the affected area. When pressed, the bulge may feel as if it is filled with liquid. Additionally, areas of redness often extend beyond the swelling (Saroj Rai, TK Dutta, A Mandal, R Behera, 2023).

Abscesses can be treated in different ways, depending on the type of abscess and its size. Major treatments include administration of antibiotics, drainage, and surgery. Proper physical and chemical containment (crushing and sedation) of animals may be critical before starting any manipulation. Additionally, aseptic procedures should be followed during procedures to reduce infection and improve disease prognosis. Small skin abscesses may drain spontaneously or simply shrink, dry, and disappear without treatment. However, large superficial abscesses may require antibiotic treatment to clear the infection and may require an incision to drain the pus. This is usually done by placing an abdominal drain and using a gloved finger to apply moderate pressure from a hose or syringe and flush thoroughly with plain water to gently help remove the pus. Ensuring clean, healthy, and mostly bacteria-free skin can therefore help reduce the risk of developing a skin abscess (Getachew, 2020). The present case report discusses the successful management of deep abscesses in cattle

Case History and Clinical Examination

On February 07, 2023, GC, Mr. Teshome Admasu brought a six-year local breed bull called "*Magal*" to Addis Ababa University, College of Agriculture and Veterinary Medicine Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital, since his animal was acquired gradually increasing unilateral left side swelling around the upper part of the hind limb started to be seen three days ago. He bought it one month ago for fattening it and sold it in the future, but he fears the swelling will reduce the cost of the animal in the market and may even lose it. Based on his complaint the bull was diagnosed by aspiration of the swollen area and the pus was detected. Then, it was a deep unilateral basket of pus in the gluteus muscle from the caudal part of the ileum to its wing, up on palpation the animal felt pain and react to percussion. Apart from local inflammation the other vital parameters were normal, therefore, the animal decided to be surgically evacuated from the abscess.

Surgical Correction

Before commencing the surgery the animal was verified again and the owner sign was informed of the risk of surgical evacuation of pus and the cost of local analgesic dealt with him. Then, the animal was taken into the crush by his owner for restraining. Since the animal was aggressive epidural nerve block was achieved by 2ml of lidocaine 2% (1mg/100kg).

Following proper physical and chemical restraining and aseptic preparation of the surgical site, surgical evacuation of the pus was performed after proper restraining in crushing in standing animals. The hair surrounding the swelling was aseptically prepared by clipping, shaving, scrubbing, and washing with water, and savlon® (Cetrimide 3% and Chlorhexidine gluconate 0.5% solution) as indicated in (Figure 14: B) below. Next, a ventral skin incision with a disposable sterile scalpel was made around the tip of the abscess as shown in (Figure 14: C) below. Fortunately, a large quantity of creamy pus was drained out as shown below in (Figure: D), since the cavity was deep pressure was applied on the upper part of the swelling dorsally and laterally to assist the drainage. After the cavity was completely emptied from the pus i.e., blood oozes instead of pus the sac of the pass was completely drained, and the cavity filled was with dilute (0.5%) tincture iodine. Then it was filled with packed with gauze soaked in tincture iodine (5%) with a set on protruding out of the incision to allow pus drainage as shown in (Figure 14: F) below. Finally, the animal was administered antibiotics and sent home after informing the owner to bring his animal the next day for wound cleaning as an appointment.

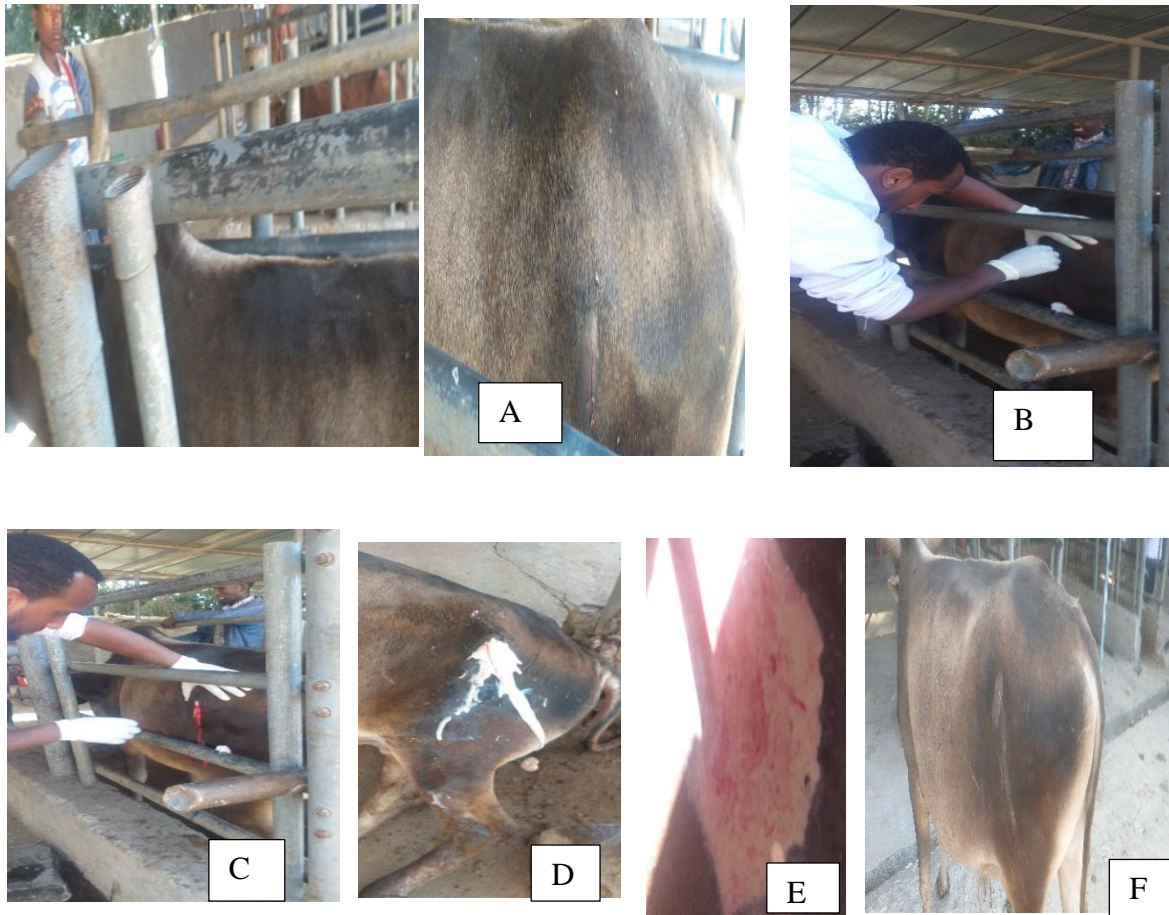


Figure 14: Abscess evacuation from gluteus muscle of local breed Bull.

A (Unilateral swelling around the gluteus muscle), B (Shaving incision area at the most ventral to swelling), C (Skin incision and pinching to star drainage), D (Drainage supported by gravity), E (Pus with creamy color), F (Symmetric animal after the evacuation of abscess).

Postoperative Care and Outcomes

The bull was given Penstrip 15ml, IM, daily for three days (procaine penicillin G 24mg/kg and dihydrostreptomycin sulfate 30mg/kg, PenStrep® Norbrook UK) and antiinflammatory drug Dexamethasone 8mg (three ampule /day) IM, for two days were given. Moreover, the wound was cleaned daily and soaked with impregnated gauze with iodine solution for three consecutive days and every two days for up to a week.

After one week the animal recovered without any complication except slight bleeding in the surgical area while soaking with gauze, but not produce a significant effect on the animal. Last, but not least, the owner was advised to clean the wound daily using soap and hot water in case the pus drain on the skin after leaving the Hospital with the cotton and glove given for him to take home for an emergency. The postoperative evaluations showed good healing progress of the surgical wound. All wounds successfully recovered after 10 days without any other complications and no signs of recurrence were seen during this period.

Discussion and Conclusion

An abscess is a circumscribed inflammatory lesion, which consists of purulent exudates. Causes of abscesses formation are variable and include a breach on the surface of the skin or mucous membrane and entrance of pyogenic microorganisms through it, infected foreign bodies migrating from the lumen of the digestive tract, the non-sterilized needle used for intramuscular injection, punctured or penetrating wounds (Getachew, 2020). The current case may be caused without the consciousness of the owner the animal may be treated by his owner with deep intra-muscular injection antibiotics before he bought one month ago, which may predispose the animal to the risk.

In the current case, the exploratory puncture was highly diagnostic and confirmed the existence of circumscribed pus and differentiate from hernia and tumor. Besides, size, consistency, nature, and color of the contents play a considerable role in the diagnosis and differential diagnosis of abscesses. Treatments of all cases depend on maturation and evacuation. A thorough examination of the abscess cavity was essential to extract any migrating foreign bodies; otherwise, the abscesses will continue to discharge pus after its opening. Treatment of large abscesses was performed by evacuation of pus from the abscess cavity along with antibacterial therapy (Saroj Rai, TK Dutta, A Mandal, R Behera, 2023). In the case under report, the evacuation was performed in collateral with antibiotic therapy, daily cleaning, and anti-inflammatory administration during the follow-up period.

In conclusion, it could be concluded that at the hospital, field, or farm level, successful management of deep skin abscess in cattle can be attained through regular drainage of the pus followed by antiseptic gauze packing to allow drainage of pus so that the parental administration of antibiotics is effective and recommended for the same case.

3.15. Wound and its Management due to Dog Bite in Ewe

Abstract

Wound management needs patience and art to correct by gradual restoration of the lost part. In the current report, a two-year-old local breed female pregnant sheep was bitten by a stray dog on the field. The ventral abdomen and groin region were avulsed, and the animal was thrown in the mud and reached by its owner four hours before admission to the Hospital. Before being taken to the patient's table for treatment the Ewe was cleaned and dried. The wound was cleaned, debrided, and closed by a vertical mattress suture pattern. The animal acquired wound dehiscence during parturition five days post-operation. However, the wound was closed again immediately and managed accordingly as principles for ten days. Finally, the animal was recovered after twenty days of its first admission to the hospital fully.

Keywords: *Closed Wound, Dog Bite, Ewe, Wound Dehiscence*

Introduction

In veterinary medicine, commonly observed wounds include lacerations, avulsions, punctures and bite wounds. Abscess as a result of infection of traumatic wounds is also frequent. To facilitate the healing process of traumatic wounds proper intervention procedures are required (Tiruneh, Bersisa and Sori, 2007). Wounds in domestic animals may be encountered due to injury while fighting, animal or insect bites, injury due to barbed wire while grazing, accidents, and blows. In animal bites, wound areas have to carefully wash with clean water till the bleeding stops, Ice packs may be applied in severe cases. In case of minor injury leave the wound as such as many of the antiseptics interfere with the healing process. But in a major wound close the wound with a thin line of antiseptics and cover it loosely with a clean gauge, so that dust particles may not enter the wound (Saroj Rai, TK Dutta, A Mandal, R Behera, 2023).

Management of an animal bite wound should start with proper local care of the wound. The wounds should be washed vigorously and irrigated with saline solution to reduce the high

inocula of the oral flora of the biting animal and devitalized tissues should be debrided (Mulugeta Kebamo, 2019).

Case history and clinical findings

Mr. Abera Lamesha brought two-year-old female sheep on February 09, 2023, GC to professor Fesseha Gebreab Memorial Veterinary Teaching Hospital of College of Agriculture and Veterinary Medicine, Addis Ababa University with a history of a dog-bitten, muddy animal in the groin area. As the owner informed, there were stray dogs those prey on the sheep and goats in the area. The ewe was bitten four hours before being admitted to the hospital in the early morning. Other sheep were bitten seriously and their life was passed before the arrival of the owner, most of them were bitten around their head and passed before presentation. Up on clinical examination, the animal was muddy in the horizontal plane which means in the ventral part of its body up to water level. There was a large hole unilaterally in the groin area of the right hind limb, the skin attaching the limb to the ventral abdomen was lacerated, and upon lifting the limb the deep hole was appreciated with lost tissues but skin. Other vital parameters were normal and the animal has pregnancy in the third trimester. Based on the above history and clinical observation the animal was decided to be managed as emergency surgery to immediately lavage, debride and close the wound. Then, the owner signs the consent form, and the animal was approved for surgery.

Surgical procedure

As can be appreciated in (Figure 15: A) below, the animal was muddy and the wound area was contaminated extremely. Therefore, the animal was showered totally to be cleaned first before commencing any surgical procedure as indicated in (Figure 15: B) below directly under the water pipe. After the cleaned animal dried in the sun for ten minutes the wound was diagnosed again for severity. Then, the wound was cleaned, the hair around the wound edge was shaved, and the irregular tissue was removed as in (Figure 15; C) below, followed by local infiltration of lidocaine hydrochloride 5 ml to the tissue around the wound. Then, the edge of the wound was refreshed to be apposed as indicated below in (Figure 15: D) below and the wound was scrubbed after being irrigated with iodine tincture three times as shown in (Figure 15; E) below. Next, the skin was closed with subcutaneous tissues by vertical mattress tension refiling pattern as indicated in (Figure 15; F and G) below. Finally,

the animal was sent home after administration of Diclofenac sodium 75mg/3ml, IM, and oxytetracycline 20%, 20mg/kg, 5ml, IM, and the owner was told to bring his animal after one day for follow-up.

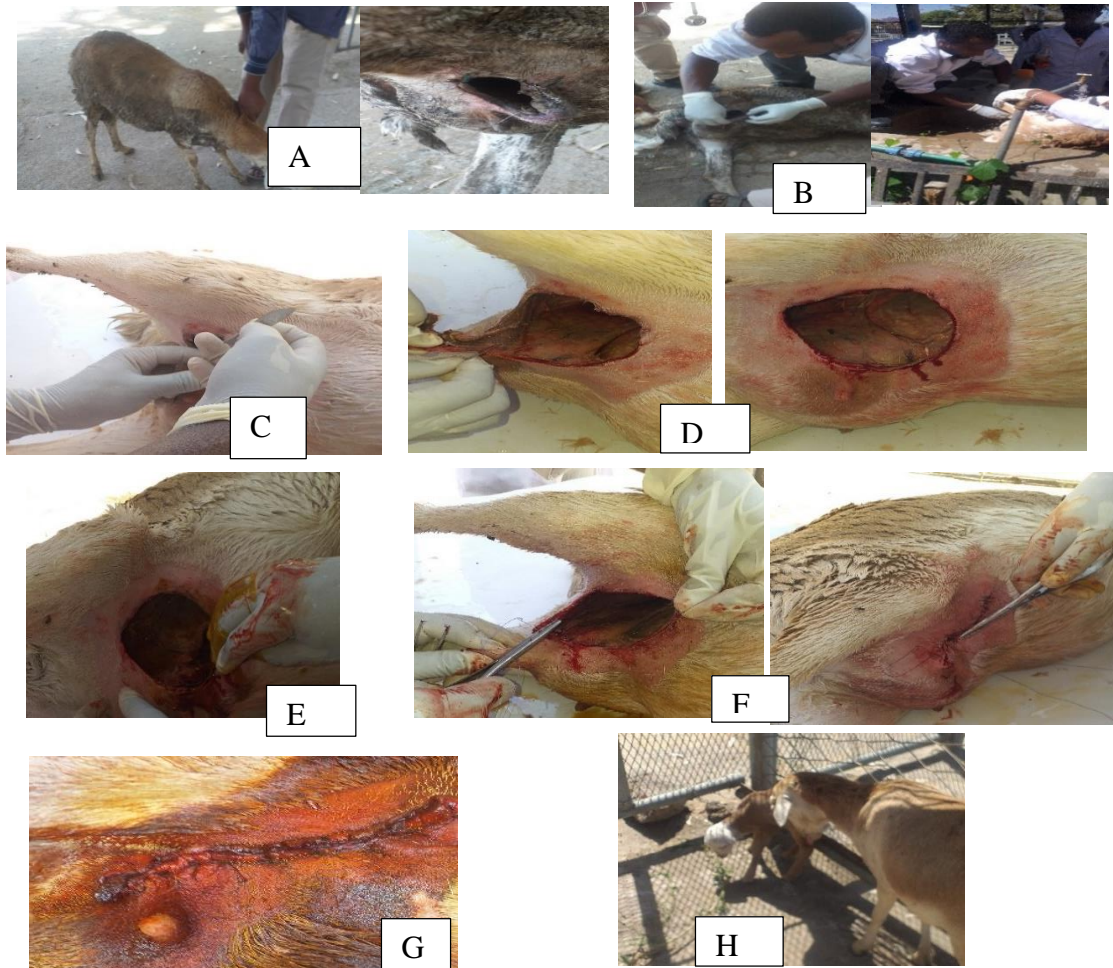


Figure 15: Wound on the ventral abdomen due to dog bite and its management in Ewe.

A (Dirty animal with wound), B (Diagnosing and Cleaning Ewe and wound), C (Shaving the hair around the edge of the wound), D (Wound debridement), E (Irrigating and scrubbing with Iodine solution), F (Wound closure), G (Scrubbed wound appearance post-operatively) and H (Three days post-operative; Ewe with Lamb at Hospital come for an appointment).

Post-operative care and outcomes

The animal was regularly checked and the wound was good up to the fifth day of the follow up at which the animal was delivered normal lamb to the owner as it was shown above (Figure 15: H) as it came for an appointment with baby. However, the animal was price its owner with the new baby lamb the wound was partially dehiscence, while it was straining and kicking for parturition during lambing. The wound was refreshed and cleaned for the second time and closed similarly. After ten days after its admission to the Hospital for the second time, the Ewe was recovered and the suture material was removed from it on the tenth day.

Discussion

In general, animal bite wounds are irrigated and treated being left open in many hospitals. However, treatment with the wound left open always results in granulation tissue formation for epithelialization. For animal bite injuries of the upper limbs, debridement to achieve wound closure may be indispensable despite the high infection rate in this area compared with other areas (Naito, Igeta and Obayashi, 2015). The current case was bitten by a dog and closed by primary intention and recovered with some complication from wound dehiscence and site infection due to direct contact with the ground, straining during parturition, and headed by nursing lamb. Anima bites result in three main types of soft tissue trauma namely punctures, lacerations, and avulsions. As a treatment, primary closure is more appropriate than second-intention healing if the debridement is performed as soon as possible (Mulugeta Kebamo, 2019). In line with this finding, the current report was closed by primary intention since the wound site, size, and time were supported to do so after a thorough cleaning, debridement, and irrigation with iodine solution before closure.

Dog bites have a more varied presentation. Because of the slashing nature of dog bite injuries, major tissue damage is usually found beneath the surface of the wound. While only small puncture marks or bruising may be evident on the surface, ribs may be broken or internal organs seriously damaged. The animal should be thoroughly examined and stabilized before definitive wound care is begun. The wound should be surgically extended as far as necessary to allow a thorough examination and determination of its extent before a decision on the repair can be made. After a proper assessment, debridement can be performed. Unless en bloc debridement is performed, complete wound closure is usually not recommended because the sites are usually contaminated. Closure can be accomplished with drains, as a delayed closure, or by second intention depending on the extent of the injury (Naito, Igeta and Obayashi, 2015). Unlike the above finding, the current case was managed to be closed not treated open. In conclusion, the above case report was managed successfully with primary wound closure and the three most common principles of wound management (lavage, debride, and close).

3.16. Orchidectomy in Donkey

Abstract

On 22nd February 2023, GC Health male donkey was presented to Addis Ababa University, College of Agriculture and Veterinary Medicine Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital by his owner for the request of castrating it, since the Jack was aggressive, looking for a female donkey and mare to mate for many times. Clinical examination revealed temperament Jack with good body condition and normal testicular descend found in the scrotum. All vital parameters were in the normal range. Based on the history and observation the donkey was approved for elective orchidectomy under physical and chemical restrain. Open castration was completed and the animal was recovered without any complication after one week post-operatively.

Keywords: *Aggressiveness, Jack, Orchidectomy*

Introduction

Orchiectomy in horses is one of the most common procedures performed by veterinary offices when animals are not used for breeding purposes or to prevent aggressive behavior. Most post-castration complications are minor and resolve easily with treatment, but more serious or life-threatening complications such as eventuation, peritonitis, and hemorrhage can occur. Good knowledge of male reproductive anatomy and physiology combined with good surgical technique can reduce the incidence of surgical complications (Dese, 2020). Ideally, male donkeys should be castrated between 6 and 18 months of age. Older donkeys can be aggressive towards fellow geldings and can be difficult to control around mares. Donkeys are often spayed at an older age due to enlarged testicles, increased scrotal and groin fat mass, and sexual behavior, all of which can lead to postoperative complications. The small size of most donkeys makes it impossible to operate standing up and requires general anesthesia and special support to monitor the animal during surgery. Postoperative care can be difficult in some untreated animals, and the stoic nature of donkeys may prevent postoperative problems from being noticed early enough. As with all equids, castration should be avoided during fly season.

Donkeys are highly ascetic creatures, and even young and healthy animals harbor ailments such as pancreatitis, hyperlipidemia, and liver dysfunction that can greatly compromise the success of the surgery. is often (Yemsrach, 2020).

Case history and clinical findings

Mother Shewaye Hailu was come to our hospital on February 21, 2023, GC with her six-year-old local breed male donkey with a complaint of difficulty managing her animal from the female donkey and horse of the neighbors and seeking for a solution to use her animal easily. The owner was added up as the jack had killed one Jenny from the neighbor by biting her dangerously for a mate. Jack also dislike the other male around him (jealousy) a t extreme level. However, the owner likes his animal for drought purposes since the jack was the best animal for her to pack anything she liked.

Up clinical examination, the jack was fount strong, unfriendly, and an adult with the best body condition. The indication for vital parameters, were temperature of 37.5 °C, respiratory rate of 16 breaths/minute, heart rate of 70 beats/minute, intestinal motility of 1 cycle/minute, normal size lymph nodes, and weight of approximately 150kg. Up on palpation, both testes were symmetrical and the scrotum was intact with good descended testicles. Based on history and physical examination the animal was appointed for the next day to be operated on after fasting for 12 hours from feed and water. On February 22, 2023, GC was brought and verified again for any deviation of vital parameters from normal ranges. Fortunately, the jack was approved for castration under the supervision of the senior surgeon as an advisor.

Treatment and outcome

After verification, the jack was sedated with xylazine 3mg/kg IM, for restraining physically with rope to keep him in lateral recumbency by tying the hind limb to the forelimb as indicated in (Figure 16: B) below to approach easily from the back. Again the testicular accessibility and asymmetry were checked by posterior traction of the scrotum from the prepuces as indicated in (Figure 16: C) below. Then, the liberal area around the scrotum and posterior prepuce were washed and the hair over the scrotum skin was shaved and scrubbed as shown below in (Figure 16: D). Then lidocaine local anesthetic was infused through the testes in the direction of the cord.

After that, the skin of the scrubbed scrotum at the tip was held by long-toothed forceps by one hand and after the testicle was retracted back circular skin incision around four centimeters from the tip of the scrotum was placed as shown below in (Figure 16: E). Then, subcutaneous fascia and muscle were bluntly dissected by hand, and the testicle was pushed and exteriorized through the incision.

Next, the exposed testicle was grasped and the tract posteriorly and the tunic over the testicle was incised to separately ligate the avascular and vascular spermatic cord as shown below (Figure 16: F). Then, the vascular part was clumped by three forceps placed 1cm apart from the distal to proximal to the taste as in (Figure 16: G), and two transfixion ligations were placed one between the distal and middle hemostatic forceps and other caudal to the distal forceps by vicryl 3-0 absorbable suture material as indicated in (Figure 16: H) below. Then it was dissected cranial to the middle forceps and the stump was checked for bleeding before the distal forceps were removed as shown in (Figure 16: I) below. The second testicle was removed by the same procedure as the former one. After the second stump was replaced the site was checked for bleeding as shown in (Figure 16: J) below.

After all, the scrotal skin was infiltrated with procaine penicillin powder, and small gauze was tamponed in the wound for pressure bandage if any bleeding came. Since slight bleeding was detected from the scrotum tissue it was clumped and the other gauze was tamponed in the scrotum two temporary retention suture were placed to keep the pressure bandage in place for one hour. Lastly, the animal was administered Dexamethasone 8mg, 10ml, IM, and Penstrip 10ml IM, and the animal was sent home.

After two hours the gauze was removed from the animal with slight blood without any complication of bleeding. The owner was advised not to mix the animal with female donkeys or horses because sexual behavior usually stays quite some time after surgical removal of the testes in donkeys that are castrated after puberty and mounting may cause excess pressure on the abdomen which may lead to evisceration.



Figure 16: Orchidectomy in local breed Jack.

A (Animal at presentation for open castration), B (Physical restraining by rope after sedation by Xylazine), C (Diagnosis for any asymmetry of testicles), D (Site preparation), E (Circular skin incision on progress after local infiltration of lidocaine), F (Incision of parietal tunics to separately ligating and severing vascular and avascular cord), G (Clumping of the separated cord by forceps), H (Transfixation ligation on progress),

I (Thumb before replacement checked for any bleeding), J (After completion, again the cord severed checked for bleeding), L and M (post-operative healed wound and good animal).

Post-operative follow-up

As the wound healed the animal was prescribed Penstrip 10ml IM daily for three days and dexamethasone 8mg (10ml) daily for two days. The wound was cleaned and irrigated with diluted iodine tincture for three consecutive days. The animal was recovered without any complications.

Discussion and Conclusion

Equine spaying is one of the most common procedures in veterinary practice to prevent aggressive behavior when animals are not used for breeding purposes. Three years ago, two studies in the same area of research by different surgeons using similar techniques and on the same animals were reported, in which mild postoperative complications such as inflammation and discomfort at the surgical site were observed. It resolved spontaneously on the 4th day. The incision was healed on the 15th postoperative day (Dese, 2020) and (Yemsrach, 2020). In contrast to the case report above, the present case was completed and cured without complications with proper surgical management of the animal, optimal for open castration under species-appropriate therapy.

Therefore, aseptic orchiectomy with anesthesia, topical antibiotic therapy and anti-inflammatory agents combined with daily wound cleansing for several days with great care is recommended as best animal care practice.

4. CONCLUSION AND RECOMMENDATIONS

The demand for high-quality veterinary service is requested every where in the country, since the value of the drought animal, meat, and milk animal increased more than triple the rate when compared back only one decade. On top of this, the cost of the drug and diagnostic materials, and facility increased at a remarkable rate. Moreover, the livestock-related economic chain was the backbone of the gross domestic product in the country, i.e., Ethiopia, with a high quantity of livestock for centuries in the continent. Unlikely, the service given and the qualified manpower in the country were far computed with what was expected by animals and humans depending on livestock for their lively hood. On the other hand, the number of practical professionals (Surgeons) was scant and did even not fulfill the minimum standard of the country's higher institution veterinary teaching college to deliver the practical course for fabricating well-equipped veterinary surgeons. Therefore, the current report was focused on the true reflection of the level of veterinary service in the country with some unreported cases before this in the country in compiled form. Even though Surgery is an integral part of veterinary care, it has its own risk associated with anesthesia and the surgical procedure that may pose loss and demand for specialist professionals.

In this report, the general pre-operative, operative, and post-operative surgical principles were followed and sixteen different veterinary surgical cases were successfully performed within six different species of animals (Bovine, Caprine, Ovine, Feline; Canine, and Equine) presented to the Professor Fesseha Gebreab Memorial Veterinary Teaching Hospital of Addis Ababa University with being the first recognized animal hospital with a specialist team and suboptimal surgical equipment. In the current report, only two cases showed major complications. One was the Ewe bitten by a dog and faced wound dehiscence as a result of parturition and pressure from nursing lamb and calf affected with a flexural deformity that was acquired from surgical site infection. However, the two cases were successfully corrected by strict follow-up and improved management. All animals were recovered after surgery except for two cases one euthanized (dog with recurring Ascites) and the other slaughtered (sheep with uroliths caused paraphimosis) at the request of owners. Generally, the good experience was obtained from the current surgical cases.

Therefore, based on the above conclusion the following recommendations are forwarded:

- The Master's program has to be endorsed by veterinary teaching senior university in the country.
- A paradigm shift in veterinary teaching, from a theoretical to a practical based teaching should be implemented.
- The analytical study should be incorporated into the future curriculum
- As for human beings, Veterinary Referral hospitals have to be established in the country.

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**PREOPERATIVE, OPERATIVE, AND POSTOPERATIVE SURGICAL
MANAGEMENT OF DIFFERENT VETERINARY CASES REPORT IS AND
AROUND BIRROTTU TOWN, OROMIA, ETHIOPIA BY SULTAN ALIYI**

ABSTRACT

Veterinary doctors have several responsibilities for animal welfare, human, and environmental health in today's world, delivering numerous benefits to society. Their main objectives are like medical doctors and the health and welfare of animals in their case. In the current report, the surgical management of different cases (spout) was performed from December 24, 2021, G.C., to February 22, 202, G.C., concerning the pre, during, and postoperative management of sixteen (16) cases of domestic animals. Among sixteen (16) cases, six (6) cases were Bovine, three (3) cases were Ovine, one (1) case was Caprine, two (2) cases were Equine (Donkeys), three (3) cases were Canine and one (1) case was Feline of different age, sex, and breeds. Based on the system affected, the reproductive system 11.25% (five cases out of sixteen cases 5/16); the digestive system 6.25% (three cases 3/16); the musculoskeletal system 12.5% (two cases 2/16); the Special sense organ system 6.25% (one case 1/16); the respiratory system 6.25% (one case 1/16) and wounds of different body parts 25% (four cases 4/16) were out of sixteen (16) cases. Moreover, the follow-up of the surgical cases indicates that: successful cases 17.5% (14 cases/ 16 cases), one animal died during 6.25% (1 case/16 cases), and one case 6.25% (1 case/16 cases) was euthanized based upon the owner request and severity. All the above cases were performed under standard anesthetic protocol based on their species differences and individual variety in premedication, induction, and maintenance stages. In addition, the Anesthetic has administration during follow-up in line with some analgesic agents. Lastly, the author discusses selected how to discuss their animal patients and the rest of their livestock.

Keywords: Case Report, Domestic Animals, Preoperative, Operative, Postoperative Care

PREOPERATIVE, OPERATIVE, AND POSTOPERATIVE SURGICAL MANAGEMENT OF DIFFERENT VETERINARY CASES REPORT IN AND AROUND BISHOFTU TOWN, OROMIA, ETHIOPIA BY SULTAN ALIYI

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