

Reconstruction of Second Degree Vulvo-vaginal Laceration in a She Buffalo: A Case Report

P. Ravi Kumar, V. Devi Prasad, D. Bhagya Raju, B. Sailaja*

Department of Veterinary Surgery and Radiology, NTR College of Veterinary Science, Gannavaram, Andhra Pradesh, India

Abstract

An 8-year-old she buffalo was presented with an injury on the ventrolateral aspect, the vulva was diagnosed to have a second degree vulvo-vaginal laceration resulting from a horn gore. The wound was debrided and was reconstructed under local infiltration analgesia which ensured a good recovery without any postoperative complications.

Keywords: *Vaginal laceration, reconstruction, second-degree lacerations, buffaloes*

***Author for Correspondence** E-mail: ravikumpallitvm1018@gmail.com

INTRODUCTION

Wounds of vulva and vagina are not uncommon in large domestic animals especially during assisted parturition by obstetrical techniques. Reports are also available mentioning human made wounds in the vagina and vulva of the animals [1]. The types of wounds usually seen on vulva and vagina of large animals are contusions, hematoma, lacerated wounds etc. Dorsal commissure of vulva and perineum were reported to be the common sites for lacerations during parturition in equines. Vaginal tears which are noticed during faulty obstetrical techniques can also lead to herniation of viscera. Reports are also available mentioning the herniation of visceral organs like ovaries [2], bladder and gravid uterus [3], intestine and uterus [4] through the vaginal tears in ruminants [5]. Horn gore injuries are frequently reported in diary animals due to managerial factors like animal husbandry, designing of the animal shed, behavior of individual animal [6]. In the present paper, successful surgical reconstruction of a second degree vulvo-vaginal laceration resulting from infighting injury has been discussed.

HISTORY AND CLINICAL EXAMINATION

An eight year old she buffalo was presented to the clinics with a long hanging tissue mass from the ventrolateral aspect of vulva that was said to have resulted from infighting while it

was butted by its fellow animal three days earlier. Animal had urinary in continence with symptoms of severe pain. Close examination of the wound disclosed a lacerated wound extending from middle of the left vulval lip to ventrolateral part of right vulval lip involving the vaginal mucosa extending up to urethral orifice exposing vaginal fat. Thus was graded as second degree laceration. The vulvo-vaginal mass, which was hanging from the wounded area was soiled with dung (Figure 1). Per rectal examination of the animal disclosed distended urinary bladder and a gravid uterine horn. Though there was pyrexia, the hematological and serum biochemical parameters were well within the normal reference levels. Based on the clinical examination, the condition was diagnosed as an extensive vulvo-vaginal laceration and was decided to be managed surgically.

TREATMENT AND MANAGEMENT

Attempts were made to massage the urinary bladder per rectally to drain the stagnated urine and also to prevent urinary incontinence. The surgery was differed to a later date to resolve the inflammation by medical therapy. The wound was laved with 1:10,000 potassium permanganate solution daily for five days. By sixth day of its presentation, the inflammation could be resolved to a major extent and the animal was prepared for aseptic surgery in standing position. Caudal epidural analgesia followed by local infiltration analgesia using

2% lignocaine hydrochloride was carried out. The wound was debrided following resection of the necrotic tissue. The vaginal mucosa was repositioned and sutured with No. 2 polyglactin 900. Vulval lips were reconstructed in three layers, first layer involving the musculature, followed by suturing of subcutaneous tissue, followed by suturing of skin (Figure 2).



Fig. 1: Photograph Showing Second Degree Vulvo-vaginal Laceration in a Buffalo. Note the soiling of the wound with dung.



Fig. 2: Photograph Showing Reconstructed Vulva.

POSTOPERATIVE CARE

Postoperatively, the animal was given bisterpen-V LD (Alembic company) at dose rate of 500 mg/50 kg body weight intramuscular injection once daily for seven days and meloxicam at the dose rate of

0.2 mg/kg body weight subcutaneous injection once daily for three days.

OUTCOME OF THE CASE

The case was reviewed on fifth postoperative day by which time it showed intact sutures and without any discharges. By the 15th postoperative day, complete healing of the wound was noticed with no further complications. The animal had normal parturition four months after surgery. In the present case, the second degree lacerations were due to a horn gore. Rau stated that, horns of cattle and buffaloes can cause goring and violent injuries in different shapes and directions in the tissues of the animals [7]. Senthilkumar *et al.* reported that, contusions, penetration of body cavities and lacerations would result from horn injuries [8]. Lacerations of perineum are also noticed during parturition of heifers and during faulty obstetrical techniques [9, 10].

The stranguria noticed in the present case was suspected to be due to the injury of vulval mucosa extending up to urethral orifice and inflammation of vagina. It can be presumed that, the treatment regimen adopted before surgery could have resolved the inflammation. Reconstruction was executed once the inflammation was subsided and granulation tissue appeared at the injury. Similar treatment protocol was also followed by Abdulla *et al.* in a buffalo with second degree perineal lacerations [11]. Reconstruction of wound in the present case yielded good apposition of wound edges without causing any unpleasant appearance.

REFERENCES

1. Oconnor JJ. Affections of the Sinuses. In: *Dollars Veterinary Surgery*. CBS Publishers and Distributors; 1980; 761p.
2. Ghuman SPS, Singh J, Honparkhe M. Protrusion of an Ovary through a Vaginal Tear Subsequent to Replacement of a Post-Partum Uterine Prolapsed in a Buffalo. *Buffalo Bull.* 2010; 29: 308–310p.
3. Noakes DE, Parkinson TJ, England GCW, *et al.* Prolapse of the Vagina and Cervix. In: *Arthur's Veterinary Reproduction and Obstetrics*. 8th Edn. Philadelphia, USA: Saunders; 2001; 145–153p.

4. Veeraiah G, Srinivas M. Spontaneous Extrusion of the Intestines and Uterus as Sequel to Vaginal Prolapsed in Buffalo Heifer: A Case Report. *Buffalo Bull.* 2010; 29: 60–64p.
5. Khar SK, Mannari MN, Singh. Genital System, Section B: Female. In: Tyagi RPS, Jit Singh. *Ruminant Surgery*. CBS Publishers and Distributors Pvt. Ltd.; 1993; 295p.
6. Busato A, Trachsel P, Blum JW. Frequency of Traumatic Cow Injuries in Relation to Housing Systems in Swiss Organic Dairy Herds. *J Vet Med A.* 2001; 1439–0442p. Doi: 10.1046/j.
7. Rau JBV. Bull Gore Injuries in Rural Areas. *Indian J Surg.* 1982; 664–671p.
8. Senthilkumar S, Madan M, Mahesh MS. Bull Gore Injury: Its Impact and Surgical Management. *Int J of Biomed and Adv Res.* 2014; 5: 279–280p.
9. Cuneo SP, Card CS, Bicknell EJ. Injuries and Diseases of Beef Cattle Associated with Calving. *Animal Care and Health Maintenance*; 1993; 1–8p.
10. Farhoodi M, Nowrouzian I, Hovareshti P, *et al.* Factors Associated with Rectovaginal Injuries in Holstein Dairy Cows in a Herd in Tehran, Iran. *Prev Vet Med.* 2000; 46: 143–148p.
11. Abdullah FFJ, Adamu L, Hashim NHB, *et al.* Surgical Management of a Second Degree Perineal Laceration in a Buffalo Sequel to Dystocia. *Int J Livest Res.* 2014; 4(1): 146–154p.

Cite this Article

P. Ravi Kumar, V. Devi Prasad, D. Bhagya Raju, *et al.* Reconstruction of Second Degree Vulvo-vaginal Laceration in a She Buffalo: A Case Report. *Research & Reviews: Journal of Veterinary Science and Technology.* 2016; 5(3): 6–8p.