

Ventral Hernioplasty in a Pulikulam Racing Bull – A Case Report

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ABSTRACT

A one-year-old Pulikulam bull was brought to the hospital with a history of gore injury and ventral abdominal swelling. On further enquiry, the owner reported that the ventral swelling was first noticed four months back immediately after the injury and it increased in size as the time progress. On physical examination reducible swelling was noticed in ventral abdomen. Under general anesthesia, the hernia ring was resected, herniorrhaphy and hernioplasty was done. Post operatively animal maintained with antibiotic and wound management. Animal had uneventful recovery.

Keywords: Hernia, Hernioplasty, Polypropylene mesh

Protruding of an organ or a tissue through an opening in the body wall and being covered by skin is called hernia. A typical hernia will have hernial ring, a hernial sac and hernial content. Hernia is categorized into two types. They are I) true hernia: contents enclosed in peritoneal sac and II) false hernia: contents not enclosed in peritoneal sac. The most common location for ventral hernia ruminants is flank region near pelvis (George *et al.*, 2021).

CASE HISTORY AND OBSERVATION

An year old pulikulam bull was presented to Large Animal Surgery Unit of Veterinary Clinical Complex, Veterinary College and Research Institute, Tirunelveli, with a past history of gore injury. Upon physical examination reducible hernia on the ventral abdomen was noticed (Fig.1). Clinical examination revealed no

abnormalities. Palpation and radiography were done and the case was confirmed as ventral abdominal hernia. Surgery was fixed for correction of Hernia.

TREATMENT AND DISCUSSION

Animal was restrained physically and the surgical site was aseptically prepared by shaving of hairs and scrubbing of the site with 7.5 % povidone iodine and surgical spirit (Fig.2). General anesthesia was achieved with injection Xylaxine 0.1 mg / kg IM, Inj. Butorphanol 0.02mg/kg IV, inj. Ketamine 0.5 mg/kg IV as preanesthetic agents and induction and maintenance with inj. ketamine 0.5 mg/kg IV, animal was positioned it left lateral recumbency. Hernial ring was palpated and a linear skin incision was made on the top of Hernial ring. Hernial sac was dissected and blunt dissection was made on subcutaneous tissue. A small incision was made on hernial sac and hernial content was examined which was the loops of small and large intestine without any change and adhesions (Fig.3). The intestine was pushed in and it was lavaged with normal saline. The intestine was repositioned to its original position. Hernial ring was resected (Fig.4) and overlapping suture was done by polypropylene 1 (Fig.5). The suture was placed using Polypropylene mesh size 30cmx30cm. It was placed on the top of Herniorrhaphy area. Hernioplasty was done by suturing the mesh with abdominal muscle with Polypropylene 1.0 (Fig.6). Subcutaneous suture was done over the mesh by using PGA 1.0. The skin was closed by cross mattress with prolene 2.0. Post

operatively the animal was treated with Inj. Ceftriaxone 10mg/kg intramuscularly for 7 days. Owner was advised to do antibiotic wound dressing. Sutures were removed on 10th post operative day, after the complete healing. Bull made an uneventful recovery (Fig.7 & Fig.8).

Hernia can be surgically corrected either by herniorrhaphy or by hernioplasty. Herniorrhaphy is usually performed in cases which has small hernial ring, where the hernial ring is resected and overlapping sutures were made (Ragunath *et al.*, 2017). In case of large hernial ring the defect is large and simple herniorrhaphy is not strong enough to prevent reoccurrence. In such cases hernioplasty with the help of synthetic non-absorbable meshes are used to provide extra support to the body wall and in turn prevent the reoccurrence (Singh *et al.*, 2012). In our case the bull was used for professional racing, hence to give a double layer protection, herniorrhaphy was performed first followed by hernioplasty was done on top of the sutured area in such a way that the mesh covering the herniorrhaphy suture line

completely. Which helped the animal in faster recovery and performance in the racing once again.

SUMMARY

A case of ventral abdominal hernia in a one-year pulikulam bull was successfully treated by Hernioplasty surgery.

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Fig. 1: Pre-operative picture (arrow) showing ventral hernia



Fig. 2: Arrow showing pre-operative preparation of surgical site



Fig. 3: Intra-operative picture showing the hernial sac with the content



Fig. 4: Picture showing resected hernial sac

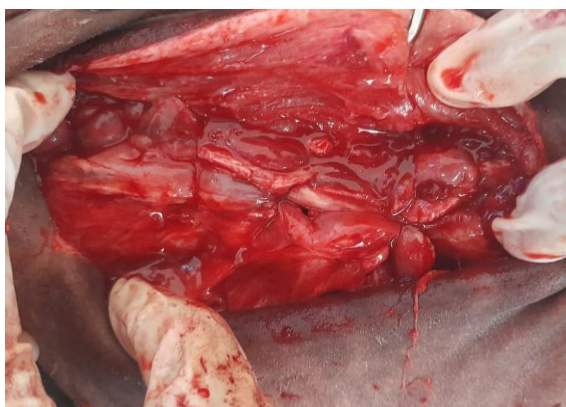


Fig. 5: Intra-operative picture showing herniorrhaphy performed by overlapping sutures with Polypropylene size 1



Fig. 6: Intra-operative picture showing hernioplasty performed over the herniorrhaphy suture using Polypropylene mesh



Fig. 7: Post-operative picture showing corrected ventral hernia



Fig. 8: Post-operative picture showing complete healing of the sutured site