

*Clinical Article*

**SURGICAL MANAGEMENT OF VENTRAL ABDOMINAL HERNIA  
(ENTERO -OMENTOCELE) IN A COW**

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**Abstract:** A six year old cattle was presented to the TVCC, IIVER, Rohtak with a history of large external swelling on ventral abdominal region since 2 weeks. Clinical examination revealed large soft reducible swelling on ventral abdominal region. On the basis of history and clinical examination the case was diagnosed as ventral abdominal hernia. The organs herniated were intestine and omentum, celotomy was performed, organs were repositioned and the herniated ring was closed by overlapping sutures using file laces. Animal recovered uneventfully.

**Keywords:** Palpebral, ventral abdomen, reducible, hernia, overlapping.

## **INTRODUCTION**

Hernia is defined as the protrusion of an organ or tissue through an opening. The opening is caused by a tear in the abdominal wall or it may be a natural opening like the inguinal canal or femoral canal (Das *et al.*, 2012). Ventral hernia is commonly seen along the costal arch, high or low in the flank, between the last few ribs or in the ventral abdominal wall near the mid line (sankar *et al.*, 2010). Ventral hernias occur generally as a result of external forces or trauma to abdominal wall (Radhakrishnan *et al.*, 1993), automobile accident (Vijayanand, 2009), weakening of the abdominal musculature or rupture of prepubic tendon (Arthur, 1989). Ventral abdominal hernia is commonly found acquired condition in ruminants and horses (Venugopalan, 1997). The present study describes a successful management of a ventral hernia in a cow.

## **CASE HISTORY AND OBSERVATIONS**

A six year old cattle was presented to the TVCC, IIVER, Rohtak with a history of large external swelling on ventral abdominal region since 2 weeks. Clinical examination revealed large soft reducible swelling on ventral abdominal region (Fig. 1). On the basis of

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history, clinical examination, rectal examination and needle aspiration the case was diagnosed as ventral abdominal hernia was decided to correct surgically.

### **SURGICAL MANAGEMENT**

The cow was kept off feed and water for 48 hr and 24 hr, respectively before surgery. The animal was restrained laterally and the area was prepared aseptically for surgery. Hernia repair was performed under 2% lignocaine hydrochloride local infiltration and sedation with xylazine hydrochloride (0.1 mg/kg body weight). Animal was restrained on left lateral recumbency. A sufficient longitudinal incision was given in the middle of the swelling and hernia ring was exposed. The organs herniated were intestine and omentum (Fig. 2). Adhesions were removed by blunt dissection and organs were repositioned. Herniorrhaphy was done using file laces in overlapping mattress pattern. Excess skin of the sac was removed and the subcutaneous tissue and skin were apposed with simple continuous suture by using catgut size no. 2 and cross mattress suture by using silk size no. 3 respectively (Fig.3) and closed cutting edges were protected by tincture benzoin seal. Post operatively animal was maintained on fluid therapy, broad spectrum antibiotic (Ceftriaxone and Tazobactam) for 7 days and non-steroid anti-inflammatory drug (Meloxicam) for a period of 3 days along with regular antiseptic dressing using povidone iodine for 10 days. Suture were removed on 11<sup>th</sup> day post-operatively. Animal recovered completely (Fig. 4).

### **DISCUSSION**

Hernias have several deleterious effects, such as lowering the productivity and reproductivity of the affected animals (Das *et al.*, 2012). Any trauma caused by kick in the camel, horn thrust in cattle or violent contact with blunt objects or automobile accident or an abscess in the abdominal cavity may lead to weakening of the abdominal muscles or by an abdominal distension due to pregnancy or violent straining during parturition may lead to ventral hernia (Krishnamurthy, 1995). Horn thrust was the cause of ventral hernia in present case. Ventral hernia is commonly seen in the ventral abdominal wall near the midline and size of the hernial opening varies in diameter and nature of hernia contents depends on the site of the herniation (Krishnamurthy, 1995). Similar location was also noticed in the present study and there was large hernial ring through which viscera protruded. There are lots of treatment options for ventral abdominal hernia that depend on the size of the hernial opening. Application of bandage, clamps or ligatures may be helpful in a few cases where the hernial ring is small. Surgical intervention (herniorrhaphy) is useful in case of large hernia opening (Abdin-Bey and Ramadan, 2001). Sankar *et al.* (2010) performed herniorrhaphy in a cow by

overlapping sutures using no.3 silk in horizontal mattress pattern. Herniorrhaphy was performed in present case using file laces in overlapping mattress pattern without any complication.

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**LEGEND OF FIGURES-**

**Fig. 1:** large soft reducible swelling on ventral abdominal region

**Fig. 2:** Herniated organs

**Fig. 3:** Skin apposed with cross mattress suture pattern

**Fig. 4:** Animal recovered completely



**Fig.1**



**Fig.2**



**Fig.3**



**Fig. 4**