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Case Report

SURGICAL MANAGEMENT OF UMBILICAL HERNIA IN A BUFFALO CALF – A CASE REPORT

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ABSTRACT
A 5 month old male buffalo calf was brought to Veterinary Hospital with the history of a long standing swelling present at the ventral abdominal wall at the point of umbilicus which was present since birth. Clinical parameters were within the normal physiological limits. On palpation it revealed very big size of oval hernial ring including umbilicus and it was reducible type of hernia. So, it was planned to perform herniorraphy.

Keywords: *Buffalo Calf, Umbilical Hernia, Herniorraphy*

INTRODUCTION
Umbilical hernias are defects in the abdominal wall that result in a round swelling at the point where the umbilical cord enters the body. Due to improper closure of the umbilicus opening at birth or from mal development or hypoplasia of the abdominal muscles (Singh *et al.*, 1989) a defect may remain in the mid ventral line to form a congenital hernial ring. It appears if complete failure of closure without narrowing of large umbilical opening of early embryonic life occurs and this opening persists even after birth, the abdominal viscera are likely to pass through this large persistent opening. This condition results in passage for prolapse of visceral mass. The present communication aims to record a case of umbilical hernia in a calf and its successful surgical management.

CASES
A 5 month old male buffalo calf was brought to Veterinary Hospital with the history of a long standing swelling present at the ventral abdominal wall at the point of umbilicus (Figure 1) which was present since birth. Anamnesis suggested that the swelling tends to increase in size as the calf gradually grows. Fine needle aspiration was done to differentiate it from abscess or tumor. Although, the appetite and water intake was reported to be normal, only scanty faeces were voided out at some point of time. Clinical parameters like heart rate, respiratory rate and rectal temperature were within the normal physiological limits. On palpation it revealed very big size of oval hernial ring including umbilicus and it was reducible type of hernia. So, it was planned to perform herniorraphy.

DISCUSSION
Food and water were withheld 12 hrs before surgery. The operation was performed in lateral recumbency. After aseptic preparation of the surgical site, xylazine hydrochloride was administered at a dose rate of 0.01 mg/kg body weight intramuscularly and 2% lignocaine was infiltrated locally at operative site. After proper analgesia, an elliptical incision was made exactly on the swelling avoiding blood vessels. By blunt dissection muscles and peritoneum were separated.
Abomasums was found as hernial contents (Figure 2). There were no adhesions and contents were replaced into the abdominal cavity. The hernial ring edges were freshened and closed by taking overlapping mattress sutures. The hernial sac and extra skin was trimmed. The subcutaneous tissue and the skin incision were closed in standard fashion (Figure 3). A course of antibiotics and analgesics were administered for a period 5 day and 3 days respectively. Daily dressing of the suture line was performed with 5% povidone iodine until healing of the surgical wound. The skin sutures were removed on the 10th postoperative day and uneventful recovery was noticed.

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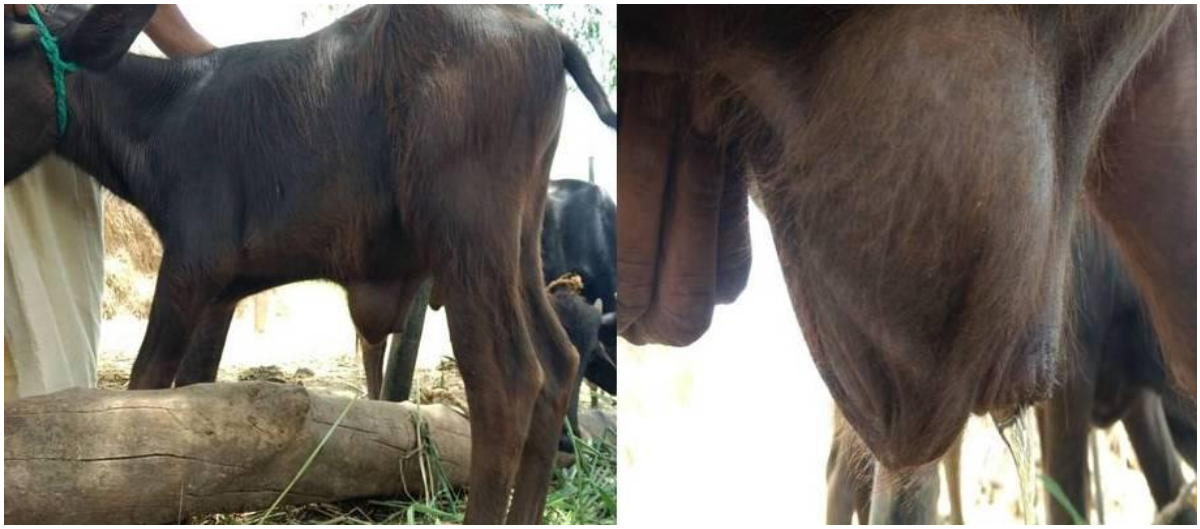

Figure 1: Swelling at the Point of Umbilicus

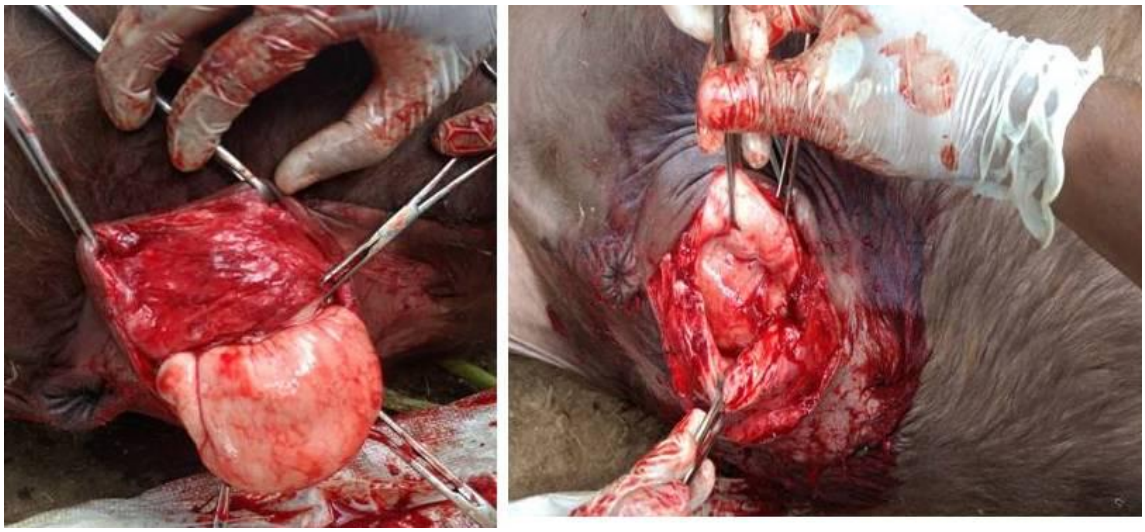

Figure 2: Hernial Contents-Abomasum

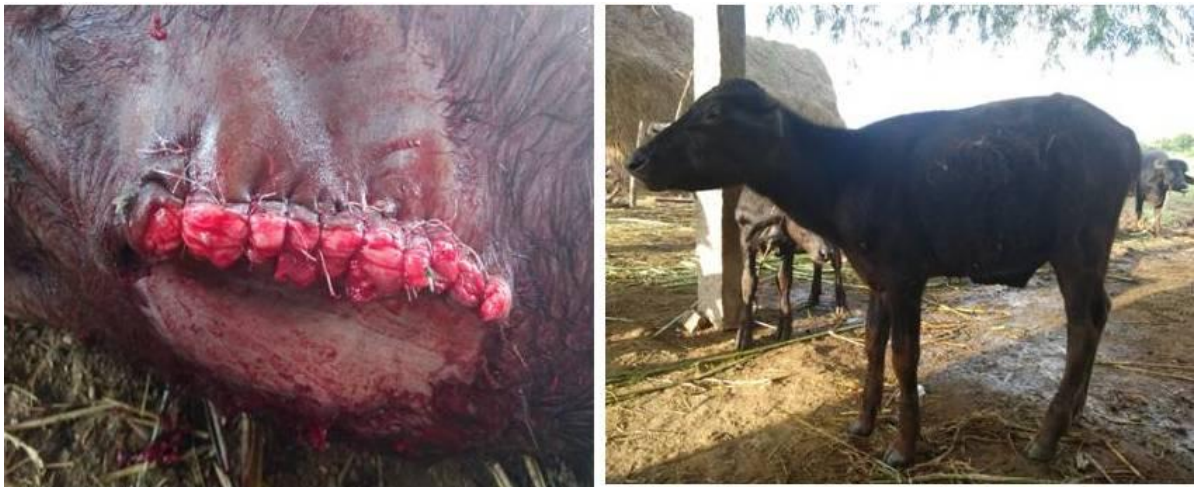

Figure 3: Repaired Umbilical Hernia

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In calves, the most common form of congenital hernia is the umbilical hernia where portions of the abdominal contents protrude out through the natural opening in the ventral abdomen left by the umbilicus (Smith, 2009). The herniated contents may also become very voluminous so that they cannot be reduced causing incarcerated hernia. Both strangulated and incarcerated hernias are life threatening conditions (Radostits *et al.*, 2007). Various scientists (Brem *et al.*, 1985 and Singh *et al.*, 1989) reported high incidence of umbilical hernia in female calves as compare to male calves, whereas Das and Hashim (1996) and Rahman *et al.*, (2001) reported low incidence in females as compare to male calves. It is generally accepted that a genetic component is involved in congenital umbilical hernias, but the hypotheses on the mode of inheritance are rather conflicting (Herrmann *et al.*, 2001). Radical surgery is the treatment of choice in the vast majority of symptomatic or asymptomatic umbilical hernias and is one of the most common surgical procedures performed (Chavez and Demoor, 2012). Conservative treatment includes belly bandages and daily irritation of the hernia to encourage closure. As a general rule, only smaller hernias (those less than 2 fingers wide or <5 cm long) have a chance of resolving with conservative management alone. If the hernia is greater than 2 fingers long (or >5 cm), then surgical correction may be necessary to restore integrity of the abdominal wall and prevent incarceration and strangulation of herniated contents (Kumar *et al.*, 2012). In the present study also surgical correction was carried out and the animal made uneventful recovery.

Conclusion

Umbilical hernia was treated successfully with herniorhhaphy in a buffalo calf. Prompt surgical intervention is the only treatment of choice for corrections of these defects to prolong the life of the patient. Delayed response and ineffective treatment may lead to serious complications which may ultimately lead to the death of the animal.

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