

## Traumatic Evisceration of Abomasum in a Jersey Crossbred Cow Surgical Management

C. Pugazharasi, P. Veeramani, M.G. Ali, Cecilia Joseph and T. Sarath<sup>1</sup>

NADP Scheme on Animal Mobile Medical Ambulance, Farmers Training Centre, Enathur, Kanchipuram - 631561, Tamil Nadu.

(Received : August, 2018 302/18 Accepted : November, 2018)

### Abstract

A five year old Jersey crossbred cow was presented with the history of recent trauma of ventral abdomen followed by protrusion of viscera through it. Clinical examination revealed the eviscerated mass as abomasum. The animal was sedated using xylazine @ 0.2mg/kg and the abomasum was reduced into the abdominal cavity and the peritoneum and abdominal muscles were sutured using No.0 Chromic Catgut in simple continuous and interlocking suture pattern, respectively. The skin was sutured using cotton suture material in criss-cross pattern. Post-operative care was followed and the animal had an uneventful recovery.

**Key words:** Cow, Abomasum, Evisceration, Trauma

Evisceration of abdomen is defined as protrusion of contents of abdominal cavity through a defect in body wall exposing viscera to the environment (Cigdem *et al.*, 2006). The evisceration may be due to genetic abnormality, physical injury, muscular weakness or cutting the umbilical cord too close to abdomen and excess traction on an oversized fetus etc., (Rathod *et al.*, 2013). Evisceration may also happen as a post-operative complication following surgery (Nelson, 1988; Herrmann *et al.*, 2000). Trauma to internal organs occurs commonly with penetrating foreign bodies, blunt abdominal trauma or may occur with bite wounds of the abdomen (Slatter, 2003), gore injury, etc. Abdominal evisceration injuries could lead to devastating injuries (Sethi *et al.*, 2009). Regardless of the inciting cause, exposure and contamination of the abdominal viscera warrants immediate surgical intervention (Smeak, 2003). The present case report describes successful surgical management of traumatic evisceration of

abomasum in a Jersey crossbred cow.

### Case History and Observations

A five year old non pregnant Jersey crossbred cow was brought with history of protrusion of abdominal viscera through ventral abdomen due to trauma which occurred one hour before presentation (Fig 1).

The clinical examination of animal revealed torn skin, muscle, peritoneum of ventral abdomen and evisceration of abomasum with tear of omentum without any perforation (Fig 1). The physical parameters were within normal range and emergency surgical intervention was planned.

### Treatment and Discussion

The cow was sedated using xylazine hydrochloride @ 0.2 mg/kg body weight intramuscularly and restrained in left lateral recumbency. The site around the tear on abdomen was prepared for aseptic surgery. The exposed and soiled abomasum was cleaned with normal saline and examined thoroughly for any perforation, contamination and viability. Then the aboma-



Fig. 1: Jersey crossbred cow with eviscerated abomasums

<sup>1</sup>Corresponding author : Email : drsarathvet@gmail.com



**Fig. 2:** Repositioning of the eviscerated abomasum on dorsal recumbency of cow

sum was carefully reduced into abdominal cavity by placing the animal under dorsal recumbency (Fig. 2) and the abdominal cavity was lavaged with 500 ml of Inj. metronidazole. The peritoneum was closed using chromic catgut No.0 in simple continuous pattern and abdominal muscle layers were sutured using No.0 chromic catgut in Interlocking pattern. The skin was closed using braided cotton suture material in criss-cross pattern. Inj. Cefotaxime @ 10mg/kg body weight, Inj. Flunixinmeoglumine @ 2.2 mg/kg body weight intramuscularly was administered as supportive therapy. Post-operative care with antibiotics and anti-inflammatory drugs were continued for five days. Antiseptic dressing using povidone iodine ointment was done twice daily and skin sutures were removed on day 15 post surgery. The animal had recovered uneventfully (Fig. 3).

The etiology for the present case was suspected due to a sharp object causing deep laceration on ventral aspect and resulting in tear of abdominal wall and evisceration of abomasum. Usually as the eviscerated organs are exposed to environment, there are more chances for contamination and congestion (Bhuyan *et al.*, 2016). Moreover the exposed viscera rapidly becomes edematous, inflamed and easily traumatized (Wykes, 1986). The case was presented without undue delay and with minimal tissue damage and contamination of eviscerated viscera. Routine wall closure



**Fig. 3:** Cow after 15 days of surgery

after proper reposition of the protruded mass and lavage with metronidazole to prevent peritonitis was carried out besides parenteral antibiotics. The surgery could be completed in 1 ½ hour without the need for additional anesthetic administration and the animal recovered uneventfully. The present case report is concluded that any condition with history of prolapse should be given immediate attention and quick surgical intervention to avoid further complication.

#### Acknowledgement

The authors are thankful to the Director of Clinics, Madras Veterinary College, TANUVAS, Chennai- 07 for the facilities extended.

#### Summary

A non pregnant Jersey crossbred cow with protrusion abdominal viscera through ventral abdomen due to trauma, evisceration of abomasal and tear of omentum was surgically corrected.

#### References

- Bhuyan, C., Sathapathy, S., Joshi, S.K., Biswal, S.S. and Sahu, S.K. (2016) Surgical management of intestinal evisceration due to dog bite in pregnant female cat. *J.S.N.* **7**; pp: 889-90.
- Cigdem M.K., Onen, A., Otcu, S. and Duran, H. (2006) Post-operative abdominal evisceration in children: possible risk factors. *Pediatric surgery international.* **22**(8); pp: 677-680.
- Herrmann, R., Utz, J., Rosenberger, E., Wanke, R. and Doll, K. (2000) Investigations on occurrence of congenital umbilical hernia in German Fleckvieh. *Zuchtungskunde* **72**: 258.
- Nelson, D.R. (1988). In: *Textbook of Large Animal Surgery*,

2nd Edn. Williams & Wilkins, Baltimore: p. 390-97.

Rathod, R., Rangananth, L. and Srinivasamurthy, K.M. (2013) Surgical Management of Evisceration due to Congenital Failure of Closure of Umbilicus in a Newborn Calf. *Indian Vet. J.* **90**; pp: 64-65.

Sethi.S., Jena.B., Dwibedi.B and Meher. S. (2017) Surgical management of evisceration of intestines due to dog bite in a mongoose (*Herpestesauropunctatus*). *The Pharma Innovation Journal*. 6(9); pp: 533-534.

Slatter D. (2003) *Textbook of Small Animal Surgery*, 3rd Edn, Saunders Publication, Philadelphia: pp.593-599.

Smeak, D.D. (2003) Abdominal hernias. In: *Textbook of Small Animal Surgery*, 3rd edn. (Ed. D. Slatter), Elsevier Science, Philadelphia, USA, pp: 449-469.

Wykes, P.M. (1986) *Current Therapy in Theriogenology*, 1st Edn. WB Saunders Company, Philadelphia, p. 145.

Indian Vet. J., May 2019, 96 (05) : 64 - 66

## Cystic and Urethral Calculi - A Case Study of Surgical Management in a Two Year Old Labrador Dog

M. Madeena Begum<sup>1</sup>, S. Tina Roshini and V. Bhuvaneshwari

Heart2heart Veterinary Hospital, No.3, Leith Castle Center Street, Santhome, Chennai-600028, Tamil Nadu.

(Received : October, 2018 373/18 Accepted : December, 2018)

### Abstract

A two year old male Labrador retriever was brought to the hospital, with history of urinary incontinence, blood tinged urine and stranguria. Physical examination revealed pain in penile region. Radiography of abdomen could confirm cystic and urethral calculi. A ventral celiotomy was performed under general anesthesia and the calculi were removed by performing cystotomy and urethrotomy. Post-operative management with urinary bladder catheterization, fluid therapy, antibiotic, analgesic and wound dressing were continued for seven days. The sutures were removed on 7<sup>th</sup> post-operative day and the animal had an uneventful recovery.

**Key words:** Cystic, Urethral Calculi, Cystotomy, Urethrotomy, Dog

Urolithiasis is the formation of sediment anywhere within the urinary tract. It usually consists of one or more poorly soluble crystalloids of urine. Urolith is an aggregation of

crystalline and matrix materials which may get deposited in one or more locations within the urinary tract (Tion *et al.*, 2015). Diagnosis of cystic and urethral calculi is to be done by clinical history, physical examination, radiography and ultrasonography (Synder *et al.*, 2005). This paper place on record cystic and urethral calculi and its surgical management in a labrador dog.

### Case History and Observations

A two year old male Labrador retriever was brought to the hospital, with history of urinary incontinence, blood tinged urine and stranguria. Physical examination revealed distended abdomen and pain in penile region.

On radiographic examination of abdomen, radio opaque calculi of various sizes were seen in the bladder and urethra behind os penis (Fig. 1). The condition was diagnosed as both cystic and urethral calculin and retrograde urohydropropulsion was attempted which failed. Hence surgical retrieval of calculi was decided. Pre-operatively blood was collected for complete

<sup>1</sup>Corresponding author : Email : mohammed.deena@gmail.com