

## VENTRAL HERNIA IN A FOAL A CASE REPORT

By

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### INTRODUCTION

Ventral abdominal hernia is the term applied to an external hernia where displacement of the abdominal contents occurs beyond the abdominal cavity other than a natural orifice (Keown, 1974), even if the hernia is situated on the lateral aspect of the abdomen (Venugopalan, 1982). Such hernias may occur wherever the abdominal wall is severely traumatized (Keown, 1974) and is not rare at its weak points, where kicks and blows are common causes (Hadley, 1924). In the meantime, herniation may be also caused by abdominal trauma, strenuous work or any other events that could increase the intra-abdominal pressure (Jennings, 1984), in addition to stress of parturition or previous abdominal surgery. Keown (1974), stated that violent contact with blunt objects of all sorts are many times responsible for these ventral hernias.

Such hernias occur in horses, occasionally in cattle but rarely in other species (Jubb and Kennedy, 1963). In horses ventral hernias result mainly from kicks while in cattle from horn thrusts (Keown, 1974). On the other hand Gohar et al. (1987) noticed that, abdominal hernias occurred more frequently in female sheep and goat particularly the adults, a fact that might be attributed to repeated pregnancies. Again, Keown (1974) recorded that, ventral hernias are not uncommon in sheep in comparable to those found in cattle, while in swine such hernias are not frequently seen but their occurrence is mostly confined to small pigs. On the other hand, Dennis and Leipold (1968) noticed that congenital abdominal hernias apart from umbilical hernias were observed in three male lambs out of 21 lamb cases.

## *Ventral hernia in a foal a case report*

Ventral hernias are seen high or low in the flank along the costal arch between the last few ribs and may also occur in the ventral abdomen near the midline and higher in the iliac region (Keown, 1974).

As ventral hernia is uncommonly recorded in foals, this report describes the most prominent clinical signs and in turn the best surgical correction of such hernia in a foal.

### **MATERIAL AND METHODS**

One year old foal was supervised at the clinic of surgery, Fac. of Vet. Med. Zagazig University with a history of ventral abdominal hernia. The case was subjected to thorough clinical examination to reach the satisfactory way of its treatment.

#### **Surgical treatment:**

Surgical interference was carried out after ten days from the appearance of the hernial swelling after complete subsiding of the inflammatory reaction and the traumatic swelling.

The animal to be operated was fasted for 24 hours prior to surgery, prepared routinely for aseptic surgery and secured in dorsal recumbency. The operation was performed under the effect of general anaesthesia using chloral hydrate and tiopental sodium combination in a dose of 6 gm/50 kg. B.W. and 10 mg/kg.B.W. respectively.

An elliptical skin incision was made over the site of the hernial swelling, the subcutaneous tissue was incised and the hernial contents were pushed back part by part bluntly then the peritoneal cavity was insufflated by 1 gm streptomycin and 1000.000 i.U. penicillin powder.

The edges of the hernial ring were trimmed to provide a raw surface for healing then sutured layer by layer with

*A.M. Abd-El-Aal et al.*

a series of interrupted mattress suture using chromic cat gut No. 3 (Fig. 5). The everted edges of the wound were sutured by simple continuous suture using the same aforementioned suture material. Skin and subcutaneous fascia were closed by interrupted mattress suture using silk No. 4 (Fig. 6) and the wound was infiltrated by 1 gm streptomycin and 1000.000 I.U. penicillin powder.

As after care the animal was daily administered a course of antibiotic in a dose of 2 gm streptomycin and 2000.000 I.U. penicillin injected I/M. for five successive days. Again as prophylaxis, antitetanic serum was injected subcutaneously in a dose of 1500 I.U. and the wound was daily dressed by alcohol. Skin stitches were removed ten days after surgery.

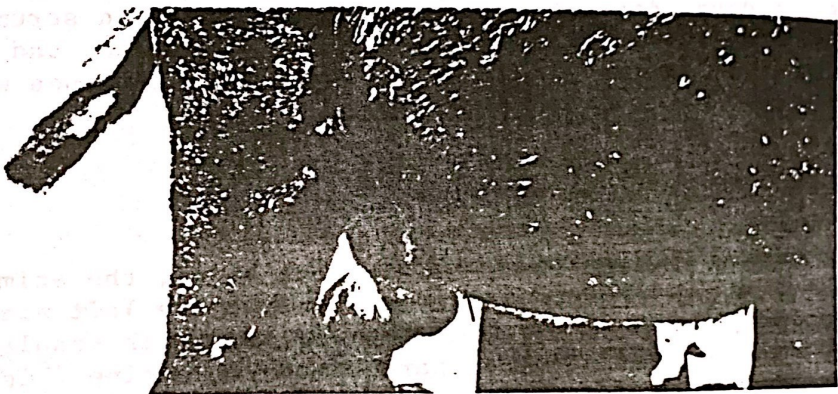
## RESULTS

As it was evident from the clinical signs, the animal was suffering from a large swelling at the left side of the ventrum of the abdomen (Fig. 1) which resulted from herniation of large part of the intestine (Fig. 3), which in turn was detected by palpation and by its variability at the surface of the swelling which showed some abrasions at the level of the groin. Such swelling was associated with diffuse inflammatory oedema of the ventral abdominal wall and the prepuce (Fig. 2). The hernial ring could not be detected by palpation. On surgery it was ovoid in shape and permitted one closed hand to pass into the abdomen (Fig. 4). peritoneum was ruptured and also the muscular layers of the abdomen were ruptured in different directions. Loss of appetite and colic were observed on the animal.

As a result of treatment, the animal did well post-operatively, its general condition was improved and good wound healing ten days after surgery was obtained.



**Fig. 1:** Showing the hernial swelling (1) and the abrasions present opposite to the hernial ring (2).



**Fig. 2:** Showing the inflammatory oedema of the prepuce and the ventral aspect of the abdomen (arrows).



**Fig. 3:** Showing the intestinal contents of the hernia (arrows).

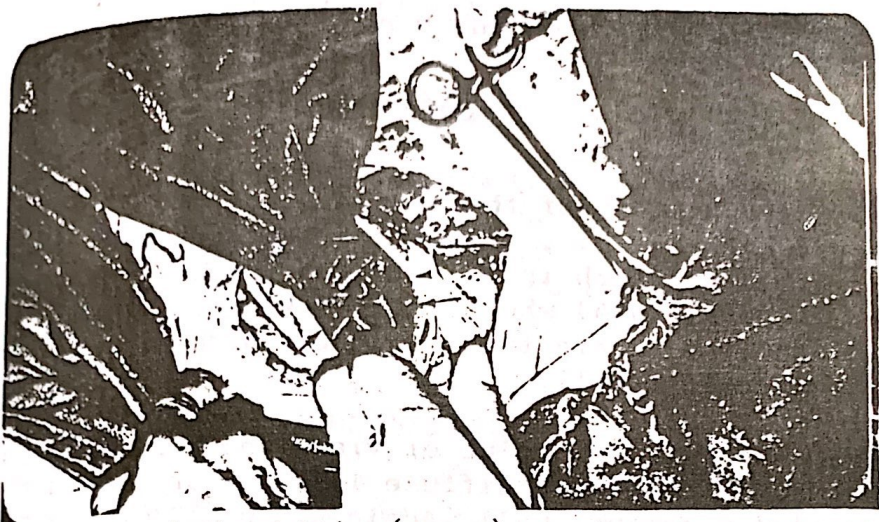


Fig. 4: Showing the hernial ring (arrows).

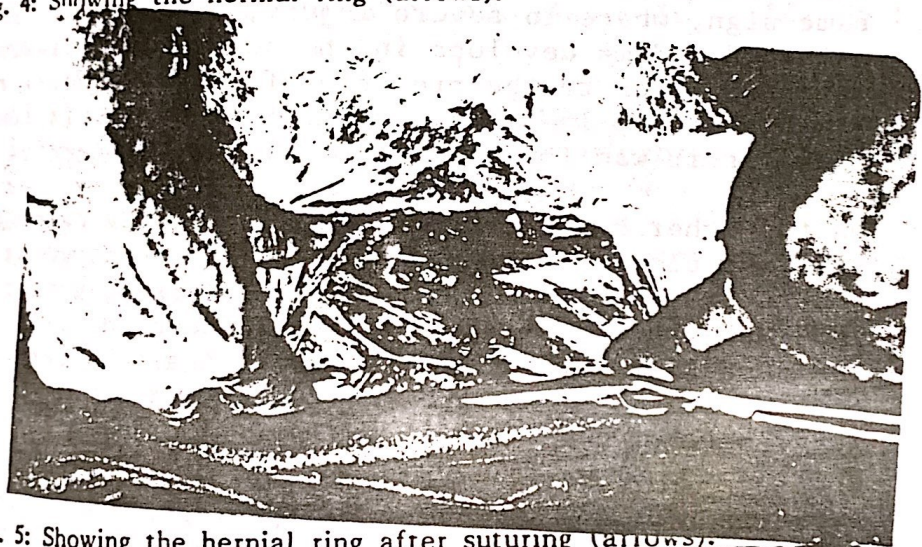


Fig. 5: Showing the hernial ring after suturing (arrows).



Fig. 6: Showing the wound after skin suture.

## DISCUSSION

From the history of the present case the animal was about one year old, this means that it is not a congenital case; which is in agreement with the findings of McIlwraith (1984) who described ventral herniation as an acquired hernia found in the ventral or ventrolateral abdominal wall.

From the clinical point of view, the hernial swelling was associated with diffuse inflammatory oedema at the ventral abdominal wall. Again Keown (1974) observed the same sign, where in severe injury, the site swells quickly and oedema develops in the surrounding tissues, which addition to the presence of narrow hernial ring was a handicap in giving an accurate diagnosis (Keown, 1974) as it was impossible to palpate the hernial ring.

On the other hand, hernial swelling of the examined case was clear at the left side of the ventrum of the abdomen at the groin region which is in agreement with what was observed by Keown (1974) where ventral hernias are seen high or low in the flank. Again he reported that at times, ventral hernias are seen involving a large part of the lateral or ventral wall.

As regards the tissue rupture, peritoneum was ruptured in the present case, but in most cases observed by Keown (1974), the hernial sac was made up of peritoneum and skin comparable to hernias through the natural orifices. On the other hand, the muscular layers of the abdomen of the reported case were ruptured in different direction, as in horses the mass of the ventral abdominal wall is composed of large rectus abdominis muscle other than an incomplete layer of the cutaneous trunci muscle (Keown, 1974).

From the aforementioned surgical treatment of the presented case, interference was referred ten days from the appearance of hernia until the inflammatory reaction and oedema completely subsided.

### SUMMARY

One year old foal suffered from ventral hernia at the left side. The case was associated with diffuse inflammatory oedema of the ventral abdominal wall and the prepuce. Surgical treatment was adopted with encouraging results and the animal did well ten days post-operatively

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