CONGENITAL UMBLICAL HERNIA IN A GERMAN SHEPARD PUP

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A six month old German Shepard pup was presented with history of swelling in cranial ventral abdomen, increasing in size. The case was diagnosed as umbilical hernia and successfully corrected by hernioplasty using polypropelene synthetic mesh.
Keywords: Hernia, Hernioplasty, Polypropelene mesh.

External abdominal hernias are defects in the wall of abdomen that allow protrusion of abdominal contents. Congenital cranial abdominal hernia is seen cranial to umbilicus and usually in association with peritoneo-pericardial diaphragmatic hernia in dogs. The occurrence of umbilical hernia varies widely in domestic animals depending on species, breed and lineage (Distl *et al.*, 2002). Umbilical hernias are usually congenital caused by flawed embryogenesis. Most umbilical hernias results from failure of fusion of lateral folds at the umbilicus (Smeak 2003). Umbilical vessels, vitelline duct and stalk of the allontois pass through the umbilical ring in the foetus but usually close at birth leaving an umbilical cicatrix. If aperture fails to contract or is too large or incompletely formed hernia results (Fossum, 2007).

Case History and Observations

A six month old German shepard puppy was presented to the Veterinary College Hospital with history of huge swelling in the cranio-ventral abdomen which was increasing in size. Upon examination, the swelling was found reducible, soft, covered by discolored skin (Fig.1). Radiological examination of the mass revealed air filled intestinal loops in the herniaed sac (Fig.2). The hernia ring was about 7 cm diameter. The condition was diagnosed as umbilical hernia and decided to correct by hernioplasty using polypropelene mesh.

Fig.1. Congenital umbilical hernia in six month old puppy

Fig.2. Radiograph of abdomen showing air filled intestine

Treatment and Discussion

Preoperatively the pup was kept off feed for 6 hours and aseptically prepared for the

surgery. As preanaesthetics triflupromazine @ 0.5mg/kg was given intravenously. Induction of general anesthesia was done using 2.5% thiopentone sodium intravenously and maintained with 1.5% isoflurane inhalant anesthesia. The dog was positioned in the dorsal recumbency. Cranial midline incision was done from xiphoid to umbilicus region. Inlay polypropelene mesh was anchored to ventral abdominal muscles, using No.1 non absorbable braided silk suture material (Fig.3). Subcutaneous tissue was closed using 1-0 chromic catgut and skin was closed using 2-0 polyamide suture material. Post operatively inj.ceftriaxone @ 25mg/kg I/M was given for 7 days. The skin sutures were removed on 10th postoperative day. The dog had an uneventful recovery.

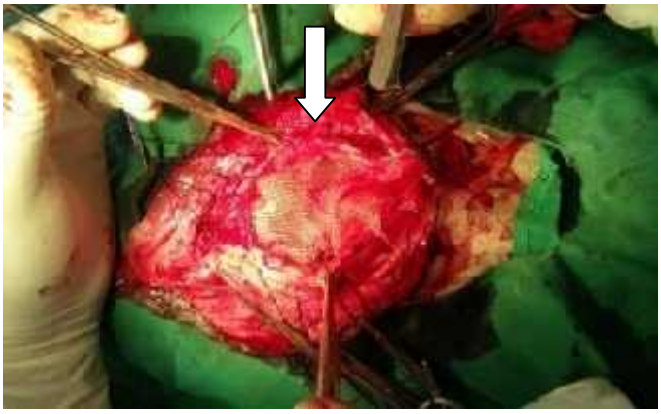

Fig.3. Hernioplasty using inlay polypropelene mesh

The use of biological or synthetic implants is recommended in cases of absence of tissue margins for proper reduction of the defect with sutures or in chronic hernias, as first intention closure may cause intraoperative rupture or early postoperative dehiscence, due to high tension of the sutures as also reported by Ferranti *et al.* (2016). Braided silk suture material has good knot holding capacity and used previously in hernioplasty case in dog yielded satisfactory result. The hernia repair using mesh is found to be a tension free technique associated with less pain as also mentioned by Shah *et al.* (2016), low rate of infection as compared to herniorrhaphy as also mentioned by Palermo *et al.* (2015).

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