

Hernioplasty in a huskydog puppy: case report
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Abstract

A huskydog puppy their age about one month suffering from a soft and swollen mass at the umbilical region was brought to the teaching hospital for diagnosis and treatment. Following a careful clinical examination, the disorder was diagnosed as an umbilical hernia. A decision was made to be treated by surgical intervention. The animal was anesthetized with a mixture of Xylazine 2%, and Ketamine hydrochloride 5% at 3\10 mg Kg Bwt, respectively which provides an optimum time to complete the operation without any adverse complications. The open surgical technique was followed to correct the hernia using Mayo mattress suture. Postoperatively, the animal was kept under an intensive care and monitoring until recovery. Two weeks later, the operation site demonstrated an excellent healing feature without any evidence of swelling. The animal looked alert, physically active with a good appetite. Two months later, a complete recovery was revealed with no recurrence of the hernia.

Keywords: Hernioplasty, puppy, huskydog.

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Received: 7-10-2018

Accepted: 4-11-2018

إصلاح فتق في احد صغار كلب الهوسكي: تقرير حالة

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الخلاصة

احد صغار كلب الهوسكي بعمر حوالي شهر واحد جلب للمستشفى التعليمي البيطري كان يعاني من كتلة متورمة ملساء الملمس في منطقة السرة. بعد الفحص السريري تم تشخيص حاله على انها فتق سري وكان القرار بالعلاج بالتدخل الجراحي. تم تخدير الحيوان باستخدام مزيج الزايلازين 2% والكيثامين 5% وبجرعة 5\3 ملغم لكل كغم من وزن الجسم على التوالي. اعطت وقت كاف لإتمام العملية بدون مضاعفات. تم استخدام الطريقة الجراحية المفتوحة لاصلاح الفتق باستخدام طريقة خياطة مايوالحشي الناعم. بعد العملية تم متابعة الحيوان تحت العناية الفائقة والمشاهدة لحد الإفاقاة. بعد أسبوعين لوحظ التئام جيد لمكان العملية واختفاء الورم والحيوان كان نشيط وفعال مع شهية جيدة وبعد شهرين حصل التئام تام من دون أي علامة لرجوع الفتق.

الكلمات المفتاحية: إصلاح الفتق، صغار، كلب الهوسكي.

Introduction

It is a common issue that ruminants are frequently referred to the veterinary clinics with different types of hernias, due to the heavy content of rumen (1). In contrast, herniation in dogs is with fewer incidence rates (2). In dogs, the most prevalent type of herniation is an umbilical hernia where portions of abdominal contents (organs and/or fats) can protruding through an opening in the muscular wall located at the umbilicus region (belly button), just below the ribcage (2). An umbilical hernia occurs due to incomplete closure of the umbilical ring after birth (2). The most common cause of this disorder is congenital, although, trauma might also have a relevance (2). Some breeds of dogs, including Airedales, Pekingese, and Basenji, are predisposing to umbilical hernias (2).

Hernias might be classified according to their location, anatomical region, clinical condition or according to the etiological factors (3). A previous research has established that umbilical hernias can affect both male and female dogs. Although it can be recovered without an intervention, it is important to get a hernia looked at by a veterinarian as soon as possible (4). Irreducible large hernias should be repaired surgically to prevent any damage or strangulation that might occur to its vital contents (4). Strangulation of intestinal loops can cause serious problems such as restriction of blood flow to the intestine and intestinal blockage that might threaten the animal life (5). The purpose of this report was to assess the efficiency of the utilized anesthetic protocol and the open surgical technique in repairing hernia in a puppy.

Material and Methods

A huskydog puppy aged about one month was brought to the veterinary teaching hospital of the University of Mosul underwent from outward bulging of a fluctuated mass at the umbilical region. Palpation of the bulged region revealed a reducible hernia with a ring's diameter of about four centimeters. Case history demonstrated intermittent abdominal pain, anorexia, and accompanied by intermittent vomiting. The animal was starved for more than 12 hours prior to the surgery. General anesthesia was applied using a mixture of Ketamine hydrochloride 5% (Rotexmedica, Germany), (5mg/kg B.Wt) and Xylazine hydrochloride 2% (Interchemie, Holland.), (3 mg/kg B.Wt), intramuscularly. To confirm the initial diagnosis, the protruded sac was examined carefully to determine the nature of its contents and the diameter of the associated ring (Fig 1). The site of operation was prepared aseptically following standard surgical protocols (Fig 2). The area of umbilicus region was identified and an elliptic incision (5 cm) was made. The flap of skin was subsided laterally to identify the hernia ring (Fig 3). The hernia sac was opened bluntly and the edges of hernia ring stitched together with Mayo mattress pattern using silk USP 1. Muscles were sutured with absorbable suture material (Catgut USP1) using lock-stitch suture. Then, the skin incision was closed by subcuticle suture technique, as a plastic skin surgery. Postoperatively, gentamycin (Uvedco) was administered at a dose of 2 mg/kg B.Wt for three consecutive days IM with daily applications of antiseptic spray.

Results and Discussion

There is a little-published data concerning umbilical herniation in the puppies, as the occurrence of this disorder is thought to be very rare. In the present report, the umbilical hernia was repaired with the open surgical protocol where, two months later, the animal was exhibited a proper healing and recovered without any complications. However, at the next post-operative day, the site of operation was palpated mildly hotter than the surrounding skin area. The most likely explanation of this observation can be attributed to the increased blood supply to the site of operation. This sign was subsided during two weeks post-surgery. This observation is consistent with previous works in sheep (6) and goats (7). The protocol of Ketamine and Xylazine and dosage of the anesthetic agents were sufficient to fulfill the surgical operation, muscle relaxation, induction and maintenance of anesthesia without any adverse complications, such as nausea. There were signs of congestion at the wound edges accompanied by an edematous swelling at the site of operation, which subsided two weeks postoperatively (Fig 4). It is proposed that these findings might have relevance with the inflammatory reaction (8-9). In general, umbilical hernia in dogs does not demonstrate any critical health problems, unless the hernia ring is large enough, where particular abdominal organs, mainly intestine, may be trapped and consequently affects animal life. For this reason, surgical intervention is required to repair the large hernias immediately after diagnosis (10). Collectively, this report highlights that an umbilical

hernia can be treated with the open surgical technique without any postoperative complications.



Fig. (1) Signs of swelling at the umbilical region



Fig. (2) Preparations the site of operation

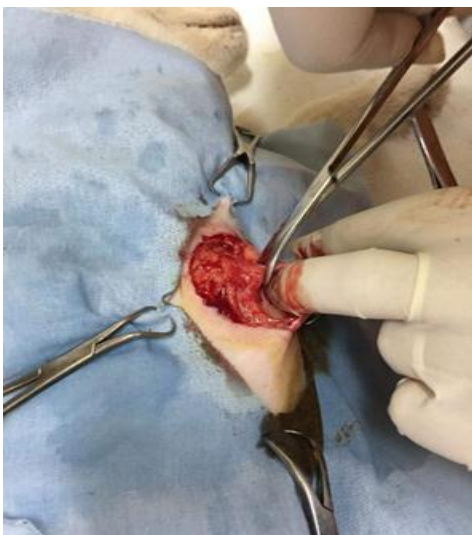


Fig. (3) Flap of skin was reflected laterally to identify the ring of the hernia



Fig. (4) Two-weeks post operation. Shown that swelling completely subsided no signs of inflammatory reaction

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