

OLGU SUNUMU

CASE REPORT

Nontraumatic Bilateral Hernia Uteri Inguinalis in an Anatolian Shepherd Dog- Report of a Case

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Key Words

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S U M M A R Y

A12- year old, multiparous Anatolian Shepherd dog was referred to university hospital with vomiting and bilateral swelling which was close to the vulva and occurred 2 years after the end of the last parturition and enlarged within last 3 months. Swelling was very painfull and sensitive to touch. The left enlargement was a pear-like shape, solid and measured 13x10 cm. whereas the right one was more solid and 3x2 cm in size. When the bitch was lied down or pressure applied the swelling did not pass to the abdominal cavity and inguinal rings were not palpable. A surgical intervention was performed accordingly. To the authors' knowledge, this is the first case of bilateral hernia uteri inguinalis in as Anatolian Shepherd Dog up to date.

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Anadolu Çoban Köpeğinde Nontravmatik Bilateral Hernia Uteri İnguinalis: Olgu Sunumu

Ö Z E T

On iki yaşında olan bir multipar Anadolu Çoban köpeği, vulva kenarlarında bilateral şişkinlik ve kusma şikayeti ile üniversite hastanesine getirildi. Olgunun, son gebelikten 2 yıl sonra oluştuğu ve şişkinliğin son 3 ay içerisinde büyüdüğü bildirildi. Şişkinliğin dokunmaya duyarlı ve ağrılı olduğu gözlemlendi. Sol taraftaki şişkinliğin armut görünümünde, sert ve 13x10 cm boyutlarında, sağ taraftaki şişkinliğin ise oldukça sert ve 3x2 cm boyutlarında olduğu tespit edildi. Şişkinliğin, köpek sırtüstü yatırılıp üzerine basınç uygulandığında, abdominal boşluğa reddedilemediği ve inguinal kanalların palpe edilemediği saptandı. Bu bulgulara dayanarak cerrahi müdahale gerçekleştirildi. Sunulan olgu yazarlara göre bugüne kadar Anadolu Çoban köpeklerinde rastlanılan ilk bilateral hernia uteri inguinalis olgusudur.

INTRODUCTION

The *canalis inguinalis* lies between the inguinal and external ring passing through abdominal wall. The cranial border of internal inguinal ring is formed by the caudal edge of insertion of the *musculus obliquus abdominis internus*. Vetro-medial border is constituted by *m. rectus abdominis* and prepubic tendon. Caudal and lateral borders are shaped by pelvic and inguinal ligaments. External inguinal ring has a split-like shape and extends to the internal inguinal ring.¹⁻⁴

Inguinal hernia is the protrusion of some organs and tissues into the *canalis inguinalis*.^{1,4,5,6} The herniated organs are commonly intestine, however omentum, urinary bladder and uterus can also be herniated.^{4,6} *Hernia inguinalis* is painless, doughy, unilateral or bilateral on palpation.⁵ However, uterus rarely herniates through *canalis inguinalis*. Adhered *ligamentum teres uteri* in the tip of the sac pulls a part of the pregnant uterus into the vaginal sac and therefore, hernia may occur.⁷ The fibers in the *ligamentum teres uteri* recline in *processus vaginalis* in the bitches. Expansion of *ostium vaginale* by stretching of the ligament during pregnancy and parturition is a predisposing factors to cause *hernia inguinalis*.⁸

Hernia uteri inguinalis is seen mostly in humans and also known as Mullerian duct syndrome which is characterized by the presence of uterus and tubes in males. Furthermore, it is a congenital disorder and usually observed in hermaphrodites.⁹ We, here, describes surgical correction of a rarely seen non-traumatic incarcerated bilateral *hernia uteri inguinale* in a bitch.

CASE HISTORY

A 12- year old, multiparous Anatolian Shepherd dog was referred to university hospital with vomiting together with bilateral swelling near the vulva. On palpation of the bilateral swellings, occurred 2 years after the end of the last parturition and enlarged within last 3 months, was painful and very sensitive to touch. The left enlargement was in a shape of a pear, solid and measured 13x10 cm. and the right one was more solid and 3x2 cm in size (Figure 1 A and B). When the bitch was lied down or pressured with fingers to the both swelling, it did not return to the abdominal cavity. In addition the inguinal rings were not palpable. To this end, a surgical intervention was decided.

After fasting 12 h, for premedication subcutaneously atropine sulphate (0,045 mg/kg) and intramuscularly xylazine (2 mg/kg), then for induction of anaesthesia intramuscularly ketamin HCl fort (10 mg/kg) were administered. Anaesthesia was maintained by isoflurane (1.5 MAC). Inguinal

side was prepared for aseptic surgery in a routine manner. The skin of the left hernial sac was incised as an elliptic shape. Connective tissue was separated and then reached to internal hernial sac. Within the internal hernial sac the left cornu uteri and its ascending ligaments were observed (Figure 2 A and B)). Then the right hernial sac was incised similarly. When the hernial sac reached, cornu uteri in hernial sacs were ischemic. Ovariohysterectomy (OHE) was performed by the midline approach. The ischemic uterus was removed. After OHE, hernial sacs were amputated from the line of hernial hole. The inguinal canal was sutured with polyglacton 910 (2 no). Connective tissue and skin were closed routinely. Before and during surgery, intravenous fluid therapy with 0.9 % NaCl was provided at the rate of 3 ml/kg/h. Postoperatively, parenteral penicillin-streptomycin was given for 7 consecutive days.

DISCUSSION

Hernia inguinalis is commonly seen in the horse, boar and dog and rarely in bulls and bitches which possesses a rudimentary inguinal canal.¹ On palpation of swelling, there was pain and sensitivity in milieu of the hernial sacs. When one of the hernial sac was opened, cornu uteri and its ascending ligaments were seen within hernial sac. Therefore, it was suggested that herniated uterus could have the same symptoms as an incarcerated intestine.

Bitches are the only mammals that have *processus vaginalis*. There is a cord which goes posteriorly below the *processus vaginalis* and the *ligamentum teres uteri* might be seen that adheres to the distal tip of *processus vaginalis* provided that each *processus vaginalis* incised.⁷ Furthermore, this ligament might direct uterus within the content through the *processus vaginalis* at pregnancy, therefore, *hernia uteri* might be seen in the *canalis inguinalis*.⁷

Inguinal hernia of pregnant uterine horns through the inguinal ring occurs occasionally in the bitch and can result in dystocia. Surgical repair of the hernia should be accomplished as soon as possible in order to prevent ischemic compromise of the growing fetus. Cesarean section may be required to deliver term pups that have herniated.⁹ Rube and Hird reported that the inguinal hernia was associated with 1.3 % of congenital abnormality in immature dog.¹¹ In our case, the bitch had healthy puppies at her last parturition. Moreover, she

did not show any clinical symptoms related to sign of hernia for two years after parturition. We think that besides of age and parturition, environmental factors could be effective contributors for its pathogenesis.

It was reported elsewhere that inguinal hernia could be caused by non-traumatic factors, however, observed a painless mass in some cases without small intestinal incarceration.⁴ Nevertheless, in our case, the mass and the pain were closely related to the

symptoms of the intestinal incarceration. Therefore, it is advocated that in case of inguinal hernia the sacs should be also evaluated for the involvement of uterus.

To the authors' knowledge, this is the first case of *hernia uteri inguinalis* in an Anatolian Shepherd dog up to date ■

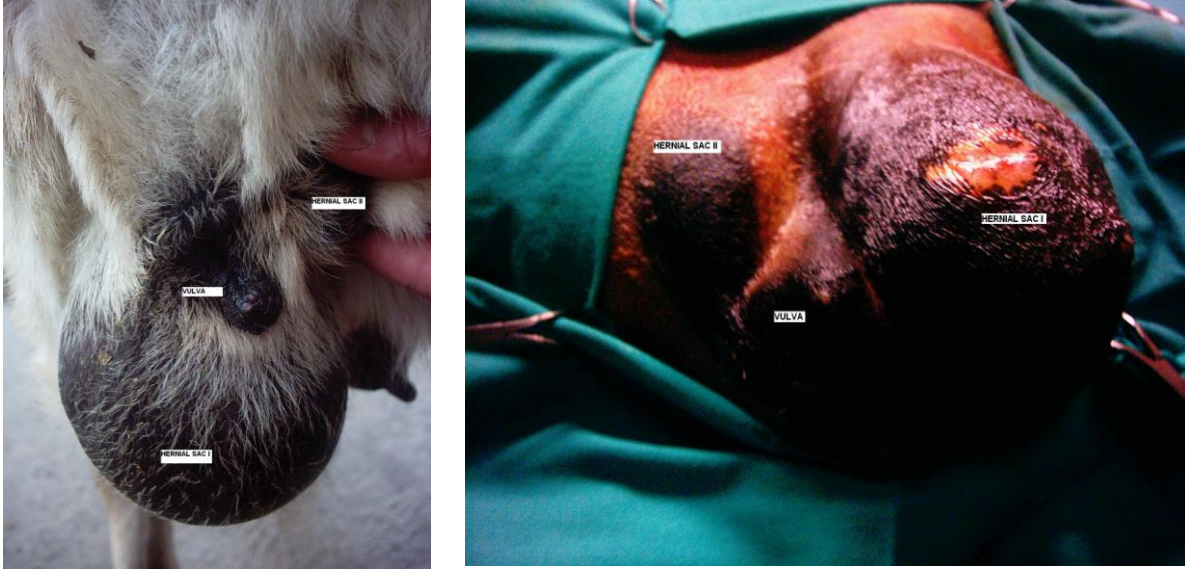


Figure 1. A) Clinical appearance of the inguinal hernia
B) Preoperative view of the case
Şekil 1. A) Inguinal fitiğin klinik görünümü
B) Olgunun preoperatif görünümü

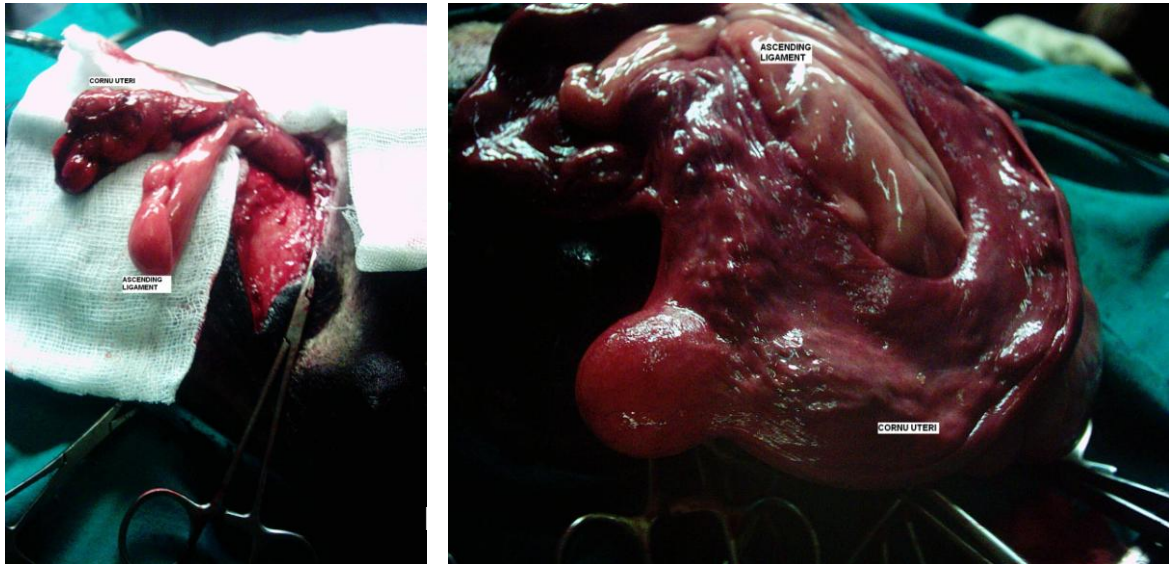


Figure 2. A) Herniated right cornu uteri (note: ascending ligament), B) Herniated left cornu uteri (note: ascending ligament)
Şekil 2. A) Fıtıklaşan sağ cornu uteri (not: ascending ligament), B) Fıtıklaşan sol cornu uteri (not: ascending ligament)

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