

Surgical Management of Fibroepithelial Polyps of the Vagina in a Bitch

Swapan Kumar Maiti^{1*}, Divya Mohan¹, Shivaraju S¹, Kalaiselvan E¹, Karikalan M² and Naveen Kumar¹

¹Division of Surgery, ICAR-Indian Veterinary Research Institute, Izatnagar, UP, India

²Centre for Wildlife, ICAR- Indian Veterinary Research Institute, Izatnagar, UP, India

*Corresponding Author: Swapan Kumar Maiti, Division of Surgery, ICAR-Indian Veterinary Research Institute, Izatnagar, UP, India.

Received: August 07, 2020; Published: September 15, 2020

Abstract

A “7-year” old Lhasa Apso bitch was presented at Institute Referral Polyclinic with a history of vaginal blood mixed discharge and dysuria for the last one week. The case was examined per vaginal thoroughly. An oval mass suspending from the vulva was seen and it appeared a typical pedunculated polyp macroscopically. The bitch was operated under general anaesthesia. Histologically it was diagnosed as fibroepithelial polyps of vagina (FEPV). The animal made an uneventful recovery with routine postoperative care.

Keywords: Fibroepithelial Polyps of Vagina (FEPV); Surgical Management; Vulva

Introduction

Fibroepithelial polyps of the vagina (FEPV) are mucosal polypoid lesions with a connective tissue core covered by a benign squamous epithelium and are thought to be rare [1-3]. FEPV have attracted special interest during the past decades because of the presence of atypical cells and abnormal mitoses in some of them [4]. Polypoid or grape-like masses of the vagina are always worrisome because they raise the suspicion of sarcoma botryoides, a highly malignant tumour with fatal outcome in human [1]. A vaginal polyp is a growth from the lining of the vagina. It is usually only apparent once it has reached a size where it causes the vulva to appear swollen or is visible as a pink mass bulging from the vulva. “Polyps” are usually fibroma, fibromyomas or sarcomas. It is now accepted that fibroepithelial polyps of the vulvovaginal region are benign non-neoplastic lesions [5] that represent reactive hyperplasia of the myxoid subepithelial zone of the lower genital tract, which is sensitive to hormonal influence. Vaginal polyps in bitches are generally benign and of smooth muscle or fibrous tissue origin [6]. These are usually solitary, measure up to several centimeters in diameter and are attached to the vaginal wall by a thin stalk. During the early stages of estrous, under the influence of the female hormone estrogen, the vaginal lining thickens causing the vulva to visibly swell. It usually causes swelling in the perineal region but sometimes the lining becomes so thickened it bulges out of the vulva. The pink masses protrude from the vulva. Initially, the surface is smooth and glistening, but with prolonged exposure it becomes dry and fissure develop [1]. FEPV may develop as a result of a granulation tissue reaction after some local injury of the vaginal mucosa. Hormonal factors may modulate the growth of FEPVs. Delayed differentiation of myofibroblastic cells may explain why granulation tissue sometimes does not contract properly but turns into polyps [7]. The treatment of choice is local excision. Recurrence may occur if resection is incomplete [8].

Case Presentation

A “7-year” old Lhasa Apso bitch was presented at Institute Referral Polyclinic with a history of bloody discharge from the vagina, difficulty in urination (dysuria), frequent urination (polyuria), licking the vulva, anorexia, restlessness for the last one week. The animal was unspayed and never given birth. Vital parameters include temperature, pulse and respiration rates were within normal range. On pervaginal examination, an oval pink colored mass suspending from the vulva was seen and it appeared a typical pedunculated polyp macroscopically and was protruding from the mucous membrane of the vaginal wall (Figure 1a and 1b). Vagina and vulva was inflamed and swelled. Chest X-ray was normal.

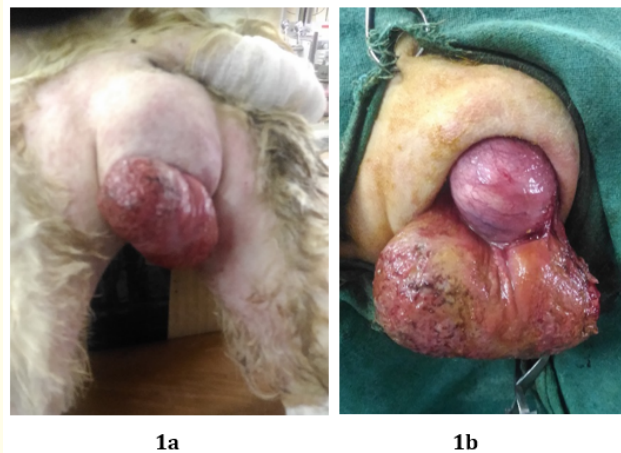


Figure 1a and 1b: An oval mass protruding from the mucous membrane of the vaginal wall.

Based on history and clinical examination, vaginal polyp was suspected and surgery was planned to remove the vaginal polyps. It differs from transmissible venereal tumour as there was no history of coitus with an infected dog and its shape is completely different from a typical “cauliflower like growth” of venereal tumour.

Surgical technique

A guideline was followed as per Institute Animal Ethics for clinical case during animal handling, anaesthesia and surgery. After pre-medication with atropine sulphate 0.04 mg/kg, butorphanol 0.05 mg/kg, diazepam 0.5 mg/kg and ceftriaxone 25 mg/kg, anaesthesia was induced with propofol 4 mg/kg and maintained with 2% isoflurane with oxygen. The site was prepared for aseptic surgery. The animal was secured in left lateral recumbency. Multiple growths of different sizes were detached from vaginal wall gently and removed through episiotomy successfully (Figure 2a-2d). Vaginal mucosa was cleaned with betadine solution and ruptured vaginal mucosa was sutured with absorbable suture (Catgut). The owner was directed to clean the animal’s vulva and vagina with betadine solution for next five days. The animal was prescribed antibiotics- Ceftriaxone 250 mg intramuscularly and anti-inflammatory agents-Meloxicam 0.5 mg/1 ml intramuscularly for five days postoperatively. No postoperative complications were recorded. Vulvar swelling was reduced and return to normal appearance.

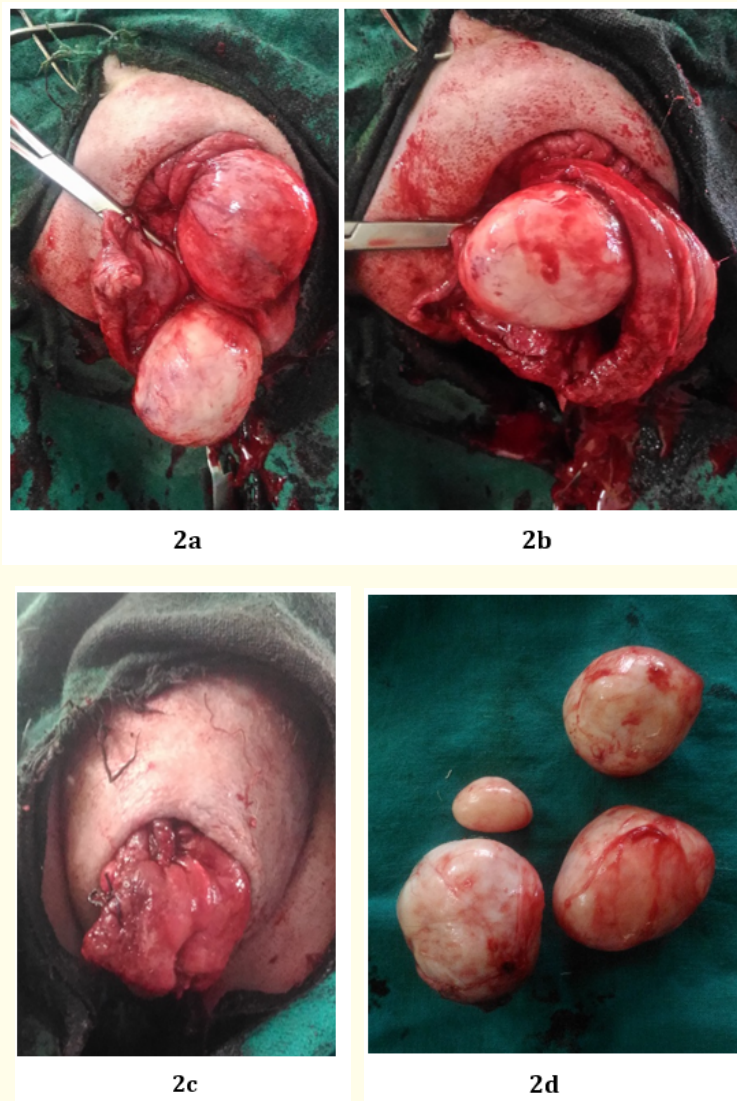


Figure 2a and 2d: Surgical removal of multiple growths through episiotomy.

Histological findings

On histopathological examination, the growths were covered by the squamous epithelial cells similar to those of normal vaginal mucosa. The interstitial tissue was severely edematous and hyperplasia of connective tissue and fibroblasts was observed. No cellular atypia was recognized and the case was diagnosed as fibro epithelial polyp of the vagina (FEPV) or typical fibroma (Figure 3) formed on the vaginal mucosa.

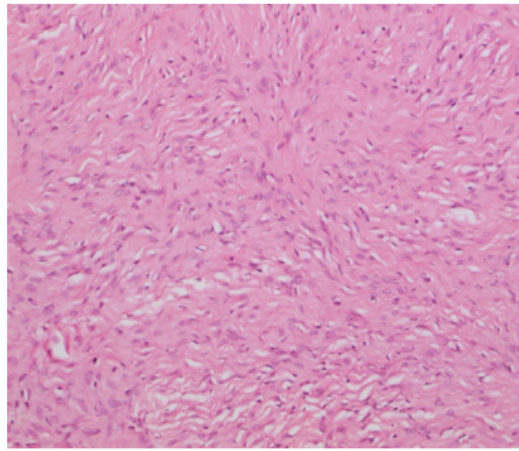


Figure 3: Fibroma.

Discussion and Conclusion

Vaginal polyps are rare in canines, however, it generally observed during the early stages of estrous particularly those are unspayed and those that have never given birth. Polypoid or grape-like masses of the vagina or cervix are always worrisome because they raise the suspicion of sarcoma botryoides, a highly malignant tumour with rapid fatal outcome. The term “sarcoma botryoides” was first employed by Pfannenstiel [9] to designate malignant mixed mesodermal tumours occurring in the urogenital tract of children, and comes from the Greek “botrys” (a bunch of grapes). The term “pseudosarcoma botryoides” was applied by Elliot, *et al.* [10] to emphasize its gross and microscopic resemblance to the malignant tumour and the fact that it has been confused with the latter [8]. Although most pathologists recognize sarcoma botryoides, few are aware of what may be regarded as its benign counterpart, first described by Norris and Taylor in 1996 [8]. They reported first on 12 cases in adults, all occurring in vagina. The term “sarcoma” being ominous and cause anxiety in the minds of clinicians. Now, many pathologists prefer the appellation “fibroepithelial polyp” for this reason. Fibroepithelial polyps of the vagina (FEPV) that may be similar both grossly and microscopically, but that behave in a benign fashion and have been termed “pseudosarcoma botryoids”. Both are rare and it is important to distinguish between them [1].

The pathogenesis of fibroepithelial polyps is poorly understood. Elliot and Elliott [11] have drawn attention to the presence of a sub-epithelial myxoid stromal zone that runs from the endocervix to the vulva in adult women. According to them, about one- quarter of these zones show anisonucleosis, and small numbers of bizarre nuclei. They believe that the polyps are the expression of a hyperplastic process arising in this matrix. Fibroepithelial polyps of the vagina (FEPV) are common lesions with benign and mono-and multinucleated fibroblastic stromal cells in which myoid differentiation is often present [7].

The characteristic microscopical features of vaginal polyps are an abundant edematous or fibrous stroma and the presence of variable inflammation and hemorrhage. There is often a superficial layer of compressed tissue, but the stroma in the peripheral areas of the masses are generally more loosely arranged than in central areas. The connective tissue cells expressed vimentin and desmin, but did not express smooth muscle actin or calponin. Additional changes including granulomatous inflammation, epithelial dysplasia [12]. Vaginal polyps in older bitches are generally benign and of smooth muscle or fibrous tissue origin, same to our histological findings [6]. Non-neoplastic vaginal polyps also occur in older bitches [13].

Vaginal polyps in women are most commonly detected in their reproductive years, have rarely been identified before the menarche and regress spontaneously following parturition [14]. "Curative" treatment for vaginal fibroepithelial polyps in women is currently achieved via surgical excision. The polyps can reoccur if the excision is not complete, but this is a relatively rare finding [15]. After one year of surgically removed different sizes vaginal polyps in this animal, no recurrence is recorded.

Conflict of Interest

The authors declare no conflict of interest.

Bibliography

1. Ostor A G., et al. "Fibroepithelial polyps with atypical stromal cells (*Pseudosarcoma botryoides*) of vulva and vagina. A report of 13 cases". *International Journal of Gynecological Pathology* 7 (1988): 351-360.
2. Burt RL., et al. "Fibroepithelial polyp of the vagina. A report of five cases". *Obstetrics and Gynecology* 47.1 (1990): S52-S54.
3. Sato Y. "A case of fibrous polyp on the vaginal mucosa in a female dog". *Japanese Journal of Veterinary Anaesthesia and Surgery* 39.1 (2008): 17-20.
4. Miettinen M., et al. "Vaginal polyps with pseudosarcomatous features". *Cancer* 51 (1983): 1148-1151.
5. McGurgan P., et al. "An immunohistochemical comparison of endometrial polyps from postmenopausal women exposed and not exposed to HRT". *Maturitas* 53 (2006): 454-461.
6. Sonderberg SF. "Vaginal disorders". *Veterinary Clinics of North America: Small Animal Practice* 116 (1986): 543-559.
7. Halvorsen TB and Johannesen E. "Fibroepithelial polyps of the vagina: Are they old granulation tissue polyps". *Journal of Clinical Pathology* 45 (1992): 235-240.
8. Norris JH and Taylor HB. "Polyps of the vagina". *Cancer* 19 (1966): 227-232.
9. Pfannenstiel J. "Das traubige Sarcom der Cervix Uteri". *Virchows Archiv* (1892): 305-337.
10. Eliot GB., et al. "Pseudo-sarcoma botryoides of cervix and vagina in pregnancy". *The Journal of Obstetrics and Gynaecology of the British* 74 (1967): 728-733.
11. Eliot GB and Eliot JDA. "Superficial stromal reaction of lower genital tract". *The Archives of Pathology* 95 (1973): 100-101.
12. Brown PJ., et al. "Fibroepithelial polyps of the vagina in bitches: a histological and immunohistochemical study". *Journal of Comparative Pathology* 147 (2012): 181-185.
13. Foster RA. "Female reproductive system". M McGavin, J Zachary (Editions), *Pathologic Basis of Veterinary Disease* (4th Edition), Mosby Elsevier, St Louis (2007): 1306.
14. Sharma S., et al. "Vaginal polyps and hormones-is there a link? A case series". *Maturitas* 53 (2006): 351-355.
15. Jallouli M., et al. "Vaginal polyp in a newborn". *European Journal of Pediatrics* 167 (2008): 599-600.

Volume 5 Issue 10 October 2020

All rights reserved by Swapn Kumar Maiti., et al.