

A Rare Case of Vaginal Dermoid Cyst: A Case Report and Review of Literature

Richa Sharma, Kamini A Rao, Shashikala Nagraj

ABSTRACT

Vaginal dermoid cyst is a rare condition. Ultrasound is the investigative tool and treatment is surgical through a transvaginal approach.

Keywords: Dermoid cyst, Vaginal cyst.

How to cite this article: Sharma R, Rao KA, Nagraj S. A Rare Case of Vaginal Dermoid Cyst: A Case Report and Review of Literature. *Int J Infertility Fetal Med* 2012;3(3):102-104.

Source of support: Nil

Conflict of interest: None declared

INTRODUCTION

The finding of paravaginal dermoid cyst is rare in gynecology practice. The key in the management is the preoperative assessment using transvaginal ultrasound and appropriate surgical intervention. We report a vaginal dermoid cyst in a young parous woman managed surgically through the transvaginal route.

CASE REPORT

A 30-year-old parous woman presented to Dr Kamini Rao hospital with complaints of nonconsummation of marriage with dyspareunia. Examination under anesthesia was performed. Vaginal introitus was tight and required dilation with Hegar's dilators. When two fingers could be passed easily, fullness was felt in the vagina. After 6 months, she had twin pregnancy which was a spontaneous conception and delivered by lower segment cesarean section (LSCS).

About 1 year after delivery, she complained of feeling something in the vagina with sensation of heaviness and dyspareunia. She had observed increase in size of the vaginal swelling after delivery. There was no history of local trauma which ruled out an inclusion cyst. She had no complaints of pain or vaginal discharge.

On speculum examination, we noticed a bulge in right lateral vaginal wall. Pelvic examination confirmed a cystic swelling of size 6 to 7 cm which was nontender but had restricted mobility. Pelvirectal exam revealed an approximately 7 × 6 cm mass filling the rectovaginal septum to right, thus ruling out any extension of swelling beyond

the paravaginal space. Its extension and size was further confirmed with transvaginal sonography (TVS) (Fig. 1).

She was investigated and TVS showed a cystic echogenic mass limited to paravaginal space of size 7 × 6.6 × 6 cm with volume of 150 ml. Patient was posted for vaginal cyst excision after necessary preoperative workup.

Pelvic examination under anesthesia was performed to see the extension of the cyst wall. A vertical incision of 4.5 cm was made after injecting 1:10 dilution of vasopressin in vaginal mucosa. Blunt dissection was done after finding the proper cleavage between cyst and the lateral vaginal wall but the cyst ruptured and there was extrusion of cheesy thick material with matted hairs. Secretions were too thick to aspirate, hence, irrigation was done to clear the field. Cyst wall was dissected free till its base, which was cauterized and cut. Hemostasis was achieved and dead space was left open. Betadine soaked vaginal packing was done with good antibiotic cover. Vaginal pack was removed after 2 days. Tissue was sent for histopathology.

HISTOPATHOLOGY REPORT: CLINICAL SPECIMEN CYST

Gross examination: Specimen consist of cut open cystic mass of 5 × 5 cm.

Cut surface shows hairs and keratin flakes. Cyst wall is lined by stratified squamous epithelium with laminated keratin (Fig. 2) with embedded hair shafts (Fig. 3). Underlying stroma shows sebaceous glands (Figs 4 and 5). Focal areas of multinucleated giant cells and histiocytes are seen.

Impression: Suggestive of dermoid cyst (vaginal cyst).



Fig. 1: Vaginal dermoid cyst in TVS

Date of Received: 18-07-12

Date of Acceptance: 03-11-12

Date of Publication: September 2012

DISCUSSION

A dermoid cyst (benign cystic teratoma) is a benign germ cell tumor that contains well-differentiated derivatives of all three germ cell layers, hence, there can be structures derived from any of these layers. A vaginal cyst is closed sac on or under the vaginal lining that contains fluid or semisolid material like in our case.

Patient can be either asymptomatic or may complain of discomfort during sexual intercourse or difficulty in inserting tampons. It can also be felt as a swelling in the vaginal wall or protruding through the vagina.

A vaginal dermoid cyst can be confused with other benign local swellings like epidermal inclusion cyst, which generally appears secondary to local trauma in the form of mediolateral episiotomy or with the Gartner's duct cyst which is derived from the mesonephric duct as an embryological remnant in the lateral vaginal wall.

Ovaries are the commonest site for this tumor, where it is the commonest neoplastic tumor in children and adolescent accounting for more than half of ovarian neoplasms in women younger than 20 years of age. More than 80% of ovarian benign dermoid cysts occur during reproductive years.

A dermoid cyst has also been reported from other parts of the human body other than the ovaries, with rare occurrence. It can be anywhere in the gastrointestinal tract from the floor of the mouth to the colon.¹⁻⁴

Dermoid cysts are formed from the outer layers of embryonic skin cells. These cells are able to mature into teeth bones or hair, and these cysts are able to form anywhere the skin is or where the skin folds inward to become another organ, such as in the mouth, nose, ear or the vagina. Sometimes teeth can be found in the vaginal dermoid cysts when they are called as *Vagina dentata*.

Dermoid cysts have also been reported in male patients, in different parts of their body. In children, it has been reported in the central nervous system.⁵

Vaginal dermoid is a rare condition. Only 6 to 7 cases have been reported in English literature. First observed in 1899 by Stokes,⁶ who reported a 44-year-old woman who

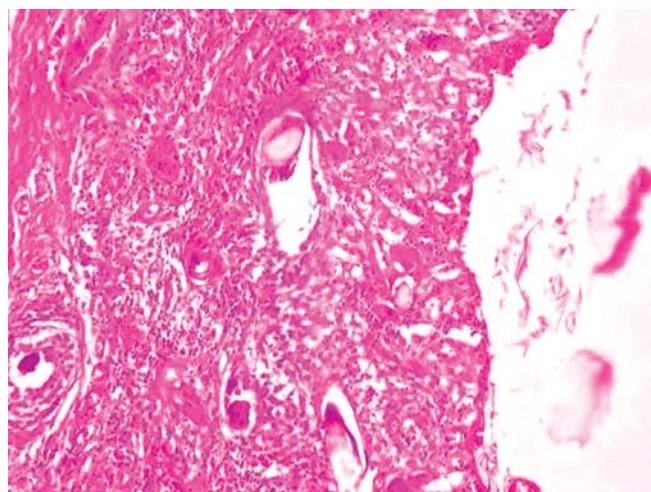


Fig. 3: Hair shafts with multinucleated giant cell in cyst wall (H&E), 100x (courtesy: Metropolis, Bengaluru)

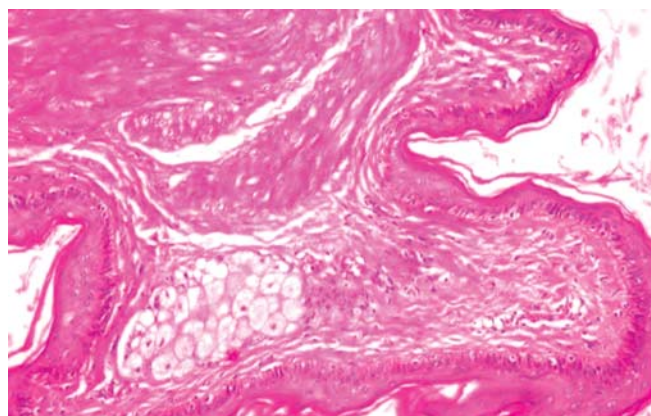


Fig. 4: Cyst wall with sebaceous gland (H&E), 100x

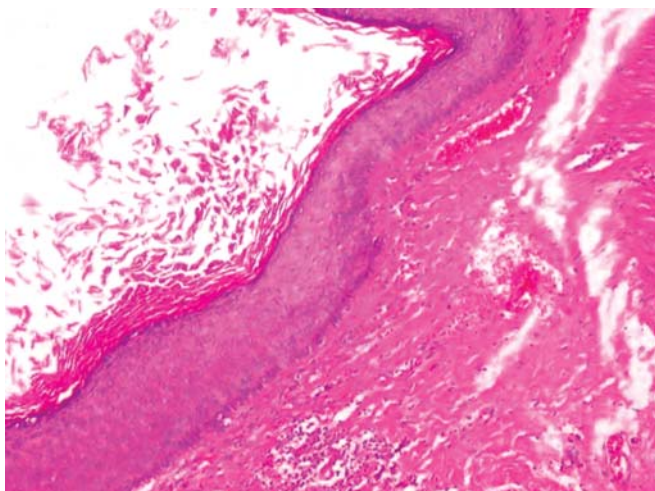


Fig. 2: Cyst wall lined by squamous epithelium with keratin

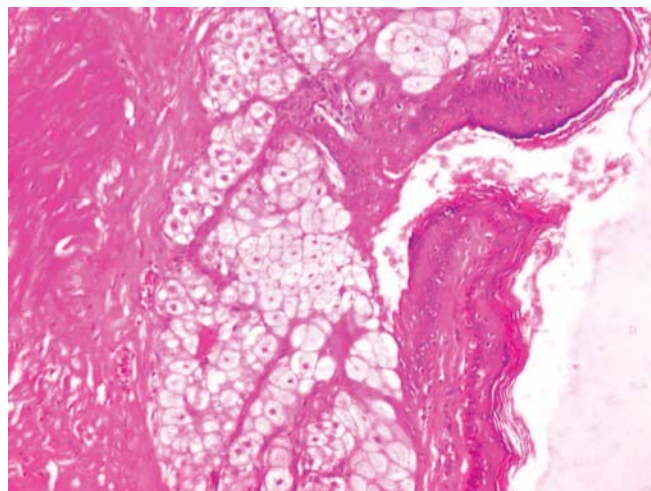


Fig. 5: Sebaceous glands (H&E), 100x

had a 1 cm cyst removed from just within the hymen. The cystic contents showed numerous sebaceous glands and a few hair follicles. Curtis⁷ described an ulcerated orange sized necrotic cyst, containing hair and sebaceous materials in the vaginal mucosa. Johnston⁸ described a 4-inch cyst that passed from the vagina in a woman following delivery of her second child. The cyst was filled with thick sebaceous material with matted hair and had been attached to the vaginal wall by a narrow stalk. Hirose et al⁹ reported another case having repeated painful right vaginal wall cyst, which was excised and was found to be a dermoid cyst confirmed by histopathological examination.

Preoperative diagnosis of the exact nature of a vaginal cyst can be difficult. Siu et al¹⁰ reported the sonographic characteristics of a vaginal cyst, which was consistent with a dermoid cyst and was confirmed by histopathological exam after surgical excision of the cyst. The same sonographic features were found in our case. Transvaginal excision of this type of cyst appears to be an appropriate surgical treatment option which was in conformity with some of the previous cases.^{6,9,10} During the vaginal dermoid cyst excision, we can encounter various difficulties as in chronic cases, we may find it difficult to get the proper cleavage due to fibrosis and this can lead to premature rupture of cyst wall, extruding the cheesy material out which makes the operative field very messy and also its very difficult to aspirate being thick material. Besides we may not be able to secure the vessels in its bed which can lead to hemorrhage. There can be secondary infection, if healing is not adequate and proper antibiotic cover is not given. Rare complication is malignancy.

CONCLUSION

Vaginal dermoid cyst is a rare condition, which can be diagnosed with ultrasound. Transvaginal excision appears to be an appropriate surgical treatment option as dermoid cyst cannot resolve on its own or medically so has to be excised. Vaginal route is preferred, if it has no intra-abdominal extension.

REFERENCES

1. Fernandez-Cebrian JM, Carda P, Morales V, Galindo J. Dermoid cyst of the pancreas: A rare cystic neoplasm. *Hepatogastroenterology* 1998;45:1874-76.
2. Fujita K, Akiyama N, Ishizaki M, Tanaka S, Ohsawa K, Sugiyama H, et al. Dermoid cyst of the colon. *Dig Surg* 2001; 18:335-37.
3. Longo F, Maremonti P, Mangone GM, De Maria G, Califano L. Midline (dermoid) cysts of the floor of the mouth: Report of 16 cases and review of surgical techniques. *Plast Reconstr Surg* 2003;112:1560-65.
4. Schuetz MJ 3rd, Elsheikh TM. Dermoid cyst (mature cystic teratoma) of the cecum. Histologic and cytologic features with review of the literature. *Arch Pathol Lab Med* 2002;126:97-99.
5. Luan Y, Wang H, Zhong Y, Bia X, Lou Y, Ge P. Traumatic haemorrhage with a cerebellar dermoid cyst. *Int J Med Sci* 2012,9(1):11-13.
6. Stokes JE. The etiology and structure of true vaginal cysts. *Johns Hopkins Hosp Rep* 1899;7:109-36.
7. Curtis AH. Transactions of societies. Chicago gynecological society. *Surg Gynecol Obstet* 1913;16:715.
8. Johnston HW. A dermoid cyst of the vagina complicated by pregnancy. *Can Med Assoc J* 1939;41:386.
9. Hirose R, Imai A, Kondo H, Itoh K, Tamaya T. A dermoid cyst of the paravaginal space. *Arch Gynecol Obstet* 1991;249: 39-41.
10. Siu SS, Tam WH, To KF, Yuen PM. Is vaginal dermoid cyst a rare occurrence or a misnomer? A case report and review of the literature. *Ultrasound Obstet Gynecol* 2003;21:404-06.

ABOUT THE AUTHORS

Richa Sharma (Corresponding Author)

Fellow, Department of Reproductive Medicine, Bangalore Assisted Conception Centre, Bengaluru, Karnataka, India
e-mail: richasharma47@gmail.com

Kamini A Rao

Director, Department of Reproductive Medicine, Bangalore Assisted Conception Centre, Bengaluru, Karnataka, India

Shashikala Nagraj

Senior Consultant, Department of Reproductive Medicine, Bangalore Assisted Conception Centre, Bengaluru, Karnataka, India