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Para vaginal Dermoid Cyst: A Diagnostic Dilemma

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Abstract:

Dermoid cyst (cystic teratoma) is a benign germ cell tumour showing well differentiated derivatives of all three germs cell layers. Ovaries remain the commonest site. Paravaginal dermoid cyst is a rare occurrence.A 48years' female presented with paravaginal cyst, (9.11x7) cm. The diagnosis of a suspected ovarian tumor was made and an exploratory laparotomy was done. On dissection, the lower margin could not be identified. So lower limit of the cyst was dissected through vaginal approach.Transvaginal excision of dermoid cyst under anaesthesia remains treatment of choice. Retrospective diagnosis on histopathological examination remains confirmatory as it may be missed on sonography if teeth are not present in dermoid cyst.

Keywords: *Benign, Dermoid cyst, Paravaginal, Teratoma*

Introduction:

Paravaginal dermoid cyst is a rare entity in gynecological practice. Dermoid cyst (cystic teratoma) showing well differentiated derivatives of all three germs cell layers is benign in nature. Ovaries remain the commonest site. 80% of benign dermoid cyst of ovary are seen in reproductive age group. In girls younger than twenty years of age, dermoid cyst accounts for more than half of ovarian neoplasms.[1]Dermoid cyst occur usually at birth or early childhood along line of embryonic fusion over head, neck, mediastinum and presacral area.[2] Paravaginal dermoid cyst constitutes less than 4% of all extra-gonadal teratomas. Till date only 7 cases of paravaginal dermoid cyst have been reported in the literature.[2] Pre-operative diagnosis of the exact nature of vaginal cyst may be difficult. Vaginal dermoid cyst was first reported in a 44year old woman with one cm cyst just within hymen. Commonly the cyst on excision shows sebaceous glands and hair follicles.[3] When teeth also form part of vaginal dermoid cyst it is called vagina dentata-a universal symbol of men's fear of women.[4] Siu et al, presented pre-operative ultrasound findings consistent with dermoid cyst of vagina. Hence, transvaginal ultrasound remains gold standard as a diagnostic tool when teeth /bone are present in dermoid cyst. Trans-vaginal surgical excision remains treatment of choice for para-vaginal dermoid cyst. Retrospective diagnosis on histopathology is confirmatory. If teeth are absent in dermoid cyst, the diagnosis may be missed on ultrasonography. Complete excision of paravaginal dermoid cyst has good prognosis.

Case Report:

Vaginal cysts are not uncommon findings in clinical practice – epidermal inclusion cysts, Gardner's duct cysts, and Bartholin's duct cysts are common types. However, dermoid cysts, ectopic ureterocele and paraurethral cysts are rare varity.[4] Pre-operative diagnosis is usually difficult in the majority of cases.

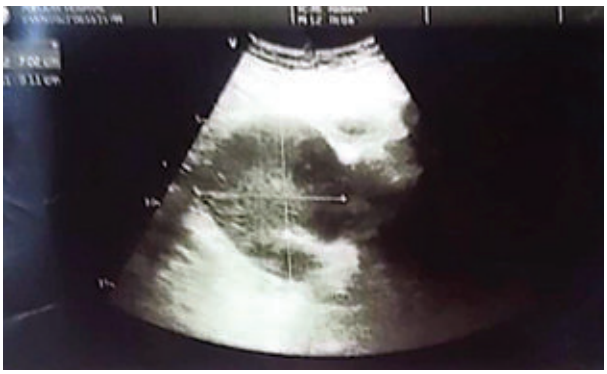

Figure 1: *USG image showing soft tissue mass (9.11x7.02 cm) in pelvis possibly right ovarian origin.*

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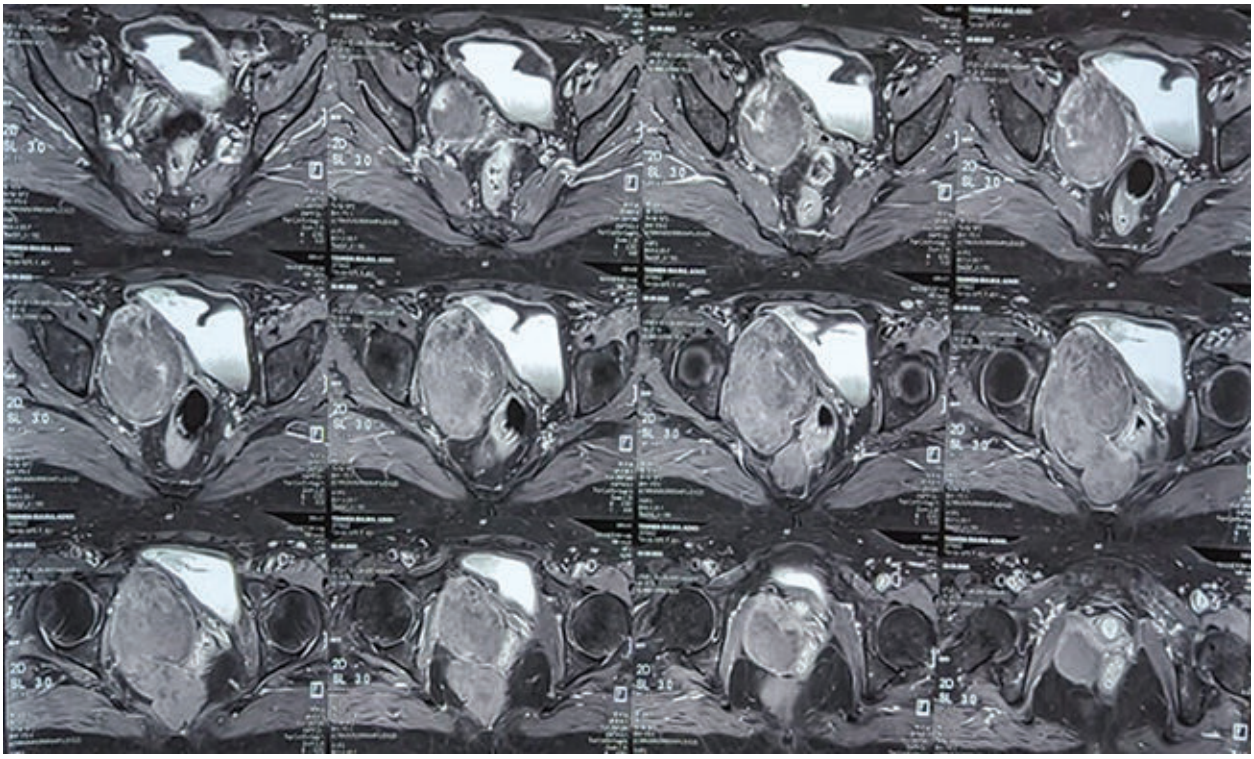

Figure -2: *MRI showing Hemorrhagic cyst (12x7x7cm) at the right adnexa with extension into right perianal compression over rectum and urinary bladder.*

A 48-year-old female presented to us with a two-months history of lower abdominal discomfort, constipation, and dyspareunia. She had a total abdominal hysterectomy with right salpingo-oophorectomy with left salpingectomy 5 years back due to AUB-A. Her general medical history revealed she is diabetic, with IHD. Her general physical examination was normal. Abdominal examination revealed no abnormality but vaginal examination showed a tender cystic mass in the right fornix not so much well deliniated. A transvaginal ultrasound revealed there was a large (9.11x7cm) soft tissue mass on the right side of the pelvis. An MRI revealed a cystic lesion in the right adnexa

(12x7x7cm) with thick septation extending into the right perianal region causing compression over the rectum and urinary bladder, with no pelvic lymphadenopathy or ascites. All the tumor markers were within normal range. The diagnosis of a suspected ovarian tumor was made and an exploratory laparotomy was done. Intraoperative findings showed a cystic mass in the right pelvic wall completely matted with vault, right pelvic wall, rectum and urinary bladder. On dissection, the lower margin could not be identified .After giving pressure per abdominaly it was approachable through the vagina .Then transverse incision was given on right fornix . Cheesy material came out containing hair. The vaginal wall was too vascular and the cyst wall was too thin to enucleate the whole cyst wall .After the removal of all the content marsupialization was done and the vaginal pack was kept for 24 hours. Left-sided oophorectomy was done and a cystoscopy was performed at the same sitting which revealed bruises on right ureteric orifice so a D-J stent was placed in the right ureter. The cyst wall

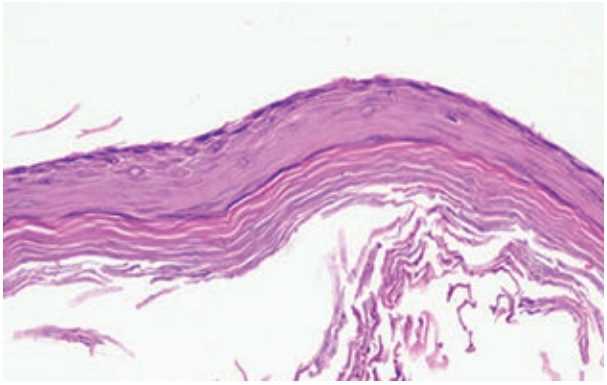

Figure -3: *Histopathology showing Dermoidcyst (Mature Cystic Teratoma).*

revealed mature cystic teratoma on histological examination. These findings suggest that the mature cystic teratoma arose from para-vaginal tissue. Retrospective diagnosis on histopathological examination remains confirmatory as it may be missed on sonography if teeth are not present in the dermoid cyst.

Discussion:

Dermoidcyst with well-differentiated derivatives of all three-germ cell layer is a benign germ cell tumour, the commonest site being ovaries. More than 50% of ovarian tumour in young girls <20 years is dermoid cyst.80% of dermoid cyst in ovary are seen in reproductive phase of life.[1] A dermoid cyst can also be present from floor of mouth upto colon in gastrointestinal tract.[5-7] As dermoid cyst arises from outer layers of embryonic skin cells which has capacity to mature into hair, teeth or bone thereby making possible to be diagnosed by sonography.

Dermoid cysts are usually present at birth and continue to grow in size with age. The cyst is similar to those present on skin tissue and can contain fat, and occasionally hair, bone,nails, teeth, eyes, cartilage and thyroid tissue. On occasion, teeth can be found within the vaginal dermoid cyst, which is known as 'vagina dentata'.[2, 4] Vagina dentata appears in the creation of myths and folkloric stories of many cultures.[8] Stokes reported vaginal dermoid cysts were first described in 1899 where a 44-year-old woman undergone removal of a 1-cm cyst located within the hymen.[3] The cyst contained numerous sebaceous glands and a few hair follicles.[3 g]An ulcerated orange-sized necrotic cyst containing hair and sebaceous materials in the vaginal mucosa.[9] In another case report, a 4-inch cyst was expelled from a woman's vagina following delivery of her second child. The cyst contained thick sebaceous material with matted hair and had been attached to the vaginal wall by a narrow stalk.[10] Hirose et al reported excision of a painful right vaginal wall cyst which was later confirmed as dermoid cyst after histopathology.[11]

From the above discussion, we found that our patient age was 48 years which is near to first described case. patient symptoms were Pelvic pain, pressure and evidence of a pelvic perineal tumour may be presenting symptom and sign.[12] which were present in our patient.In our case vaginal dermoid cyst is well demarcated from surrounding vaginal tissues and its contents were hetero echogenic on transvaginal sonography.MRI report revealed a cystic lesion in the right adnexa (12x7x7cm) with thick septation extending into the right perianal region causing compression over the rectum and urinary bladder.Transvaginal excision of paravaginal dermoid cyst under regional anesthesia remains treatment of choice as done in present case and other authors.[2-4,10]But in our patient, first exploratory laparotomy was done. The lower margin could not be identified so an approach through the vaginal route was done. Cystoscopy was performed at the same sitting which revealed bruises on right ureteric orifice so a D-J stent was placed in the right ureter.

Vaginal teratoma is a rare and benign condition that can be diagnosed by histopathological examination and treated with surgical excision. Long term follow-up is desired. Patients with complete resection of benign teratoma have excellent outcome.[12]

Conclusion:

Paravaginal dermoid cyst (benign mature teratoma) though rarest of rare must be kept for differential diagnosis of vaginal cysts-a common occurrence. Preoperative diagnosis may be difficult or missed on sonography in absence of teeth and bone tissue in dermoid cyst. Transvaginal excision under anaesthesia remains treatment modality of choice. Histopathological examination remains gold standard for retrospective diagnosis of paravaginal dermoid cyst. Follow-up till life is mandatory. Complete resection of para vaginal dermoid cyst has an excellent prognosis.

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