CASE REPORT

Large posterior vaginal cyst in pregnancy

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SUMMARY

A 20-year-old primigravida presented in labour with a mass protruding from her vagina during uterine contractions. The mass was a large tense cyst measuring 8×8 cm arising from the posterior vaginal wall. The cyst was present since puberty but increased in size during pregnancy. It collapsed following aspiration and uneventful vaginal delivery was conducted. Following delivery, the cyst was excised and vaginal wall repaired. On histopathology the cyst was identified as a Müllerian cyst. The patient recovered and remained asymptomatic on follow-up.

BACKGROUND

Cystic lesions of the vagina are uncommon and usually reported to occur in the third and fourth decades of life. Numerous case reports exist where vaginal cysts presented as a prolapsing mass per vaginam or rarely as cystoceles or enteroceles. However, only a few have reported vaginal cysts encountered during pregnancy and labour.¹ This case report presents a rare case of a large posterior vaginal wall cyst in a labouring woman where the delivery was conducted vaginally, uneventfully, following aspiration of the cyst along with cyst excision and vaginal repair in the same sitting.

CASE PRESENTATION

A 20-year-old unbooked primigravida with full-term pregnancy, labour pains and leaking per vaginam for 6 h, presented with a mass protruding from her vagina since the onset of strong labour pains. The mass was pinkish in colour, hen's egg sized and protruded only during uterine contractions (figure 1). Detailed history of the patient revealed that she had first noticed the mass inside the vagina 8 years earlier. The mass was pea sized and asymptomatic at that time. The patient's menstrual cycles remained normal and there was no symptom of dyspareunia. The mass gradually increased in size during pregnancy. There was no history of associated bladder or bowel disturbances. The mass did not increase on straining or lifting heavy weights. There was no history of any pelvic trauma, and no urological or gynaecological procedures. The patient was well built with stable vitals. On abdominal examination, the uterus corresponded to term pregnancy with cephalic presentation. Uterine contractions lasting 10–20 s every 5 min were recorded. The fetal heart rate was 144 bpm. The cardiotocograph was reactive. On local examination, an 8×8 cm pink cystic mass was seen protruding from the vagina during uterine contractions and receding completely in between the contractions (figure 1). On per speculum

examination the mass was seen arising from the posterior vaginal wall. It was mobile and well demarcated with blood vessels running over its smooth surface. The mass extended from just below the level of cervix to 2 cm inside the introitus. On palpation, the mass was found to be tense cystic and non-tender with no cough impulse. Further on per vaginam examination, the cervix was found to be 7 cm dilated and fully effaced. Station was at –2 and membranes were absent with clear leaking per vaginam. The pelvis was assessed and found to be normal.

DIFFERENTIAL DIAGNOSIS

The mass was provisionally diagnosed as posterior vaginal wall cyst, probably epidermal inclusion or Müllerian. Other differentials such as rectocele and enterocele were ruled out on examination. Rectocele was ruled out as on rectal examination the cyst wall was felt separate from the rectal wall. Enterocele was ruled out by the absence of cough impulse. Similarly, possibility of the cyst being a Bartholin's or Gartner's cyst was ruled out as it was located in posterior vagina, whereas Bartholin's cysts arise laterally medial to the labia minora and Gartner's cysts are present anteriorly or anterolaterally in the vaginal wall.

TREATMENT

The patient was planned for normal vaginal delivery. The cyst was punctured and around 50 mL of clear yellowish fluid aspirated following which the cyst collapsed (figure 2). Labour was then augmented with oxytocin. Episiotomy was performed to assist vaginal delivery taking care not to involve the cyst lining. A baby boy weighing 3 kg was born uneventfully. Placenta and membranes were expelled. Under local anaesthesia, the collapsed

Figure 1 Posterior vaginal wall cyst prolapsing through vaginal introitus during uterine contraction.

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Figure 2 Vaginal cyst collapsed after aspiration of fluid.

cyst and excess vaginal mucosa were excised (figure 3). Following this, the vaginal mucosa was approximated with continuous running absorbable sutures. Episiotomy was closed in layers (figure 4). Haemostasis was attained. The patient made an uneventful recovery, was followed up for 3 months and remained asymptomatic. On histopathology, the excised cyst wall was lined by mucin secreting tall columnar cells characteristic of Müllerian cysts.

OUTCOME AND FOLLOW-UP

The patient made an uneventful recovery, was followed up for 3 months and remained asymptomatic.

DISCUSSION

The prevalence of vaginal cysts has been estimated to be 1 in 200, but this number is an underestimate as most vaginal cysts are not reported.¹ Vaginal cysts have been classified according to the histology of cyst lining as epidermal inclusion cysts, embryonic (Müllerian or Gartner's cysts) and urothelial cysts.² Müllerian cysts are the commonest congenital cysts of the vagina varying in size from 1 to 7 cm. They usually occur singly in the anterolateral vaginal wall, although a few multifocal Müllerian cysts have been reported.³⁻⁴ Müllerian cysts arise at the level of the cervix and usually present as prolapsing masses; rarely they may extend anteriorly as cystoceles or posteriorly as enteroceles.⁵⁻⁹ Large vaginal cysts are anticipated to cause obstruction to vaginal delivery. The increase in size of vaginal

Figure 3 Episiotomy performed sparing the collapsed cyst wall.

Figure 4 Repaired and reconstructed posterior vaginal wall mucosa after excision of cyst and overlying excess vaginal mucosa, along with the unsutured episiotomy.

cysts during pregnancy, as seen in the present case, can be hypothesised to be due to increased vascular supply during pregnancy. A few case reports of vaginal cysts complicating pregnancy have been presented.¹⁰⁻¹¹ Fischer, in 1912, used forceps to assist vaginal delivery in a pregnancy complicated by a large posterior vaginal wall cyst. However, Frank, in 1915, performed a caesarean section in a pregnancy complicated by a large Gartner's cyst. Rashmi *et al* reported a case in 2005 where caesarean section was performed in a pregnancy complicated by a vaginal Müllerian cyst presenting as a prolapsing mass per vaginam, to avoid difficulty in vaginal delivery. Thus the present case is novel in the sense that it describes an uneventful vaginal delivery in pregnancy complicated by a previously undiagnosed large posterior vaginal Müllerian cyst by collapsing the cyst through aspiration. Also, excision of the collapsed cyst and repair of posterior vaginal wall were undertaken immediately postdelivery just prior to episiotomy repair.

Learning points

- ▶ Vaginal wall cysts are uncommon and are classified according to the lining epithelium of the cyst into epithelial inclusion cysts, embryonic (Müllerian and Gartner's) cysts and urothelial cysts.
- ▶ Müllerian cysts are the commonest congenital cysts of the vagina and the usual location is anterolateral vaginal wall, but rarely they present posteriorly.
- ▶ Müllerian vaginal wall cysts can increase in size during pregnancy and might threaten to complicate vaginal delivery.
- ▶ Uneventful vaginal delivery can be anticipated even in the presence of a large posterior vaginal wall cyst by aspiration of the cyst.
- ▶ Excision of cyst and repair and reconstruction of the vaginal wall can be undertaken immediately postdelivery.

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