

## **Case Presentation**

### **Pt MC, Age 12 years**

This 12 year-old girl presented with profuse vaginal bleeding and abdominal pain following a fall in the bathroom after taking a shower. It became a surgical case after initial imaging.

The case is interesting for several reasons: It highlights the anatomy of the area; the importance of being acutely aware of all possibilities in the diagnosis of prolonged vaginal bleeding and abdominal pain; and the need for emergent evaluation, stabilization and immediate exploratory surgery; all of which take place before assessment for child abuse is even considered.

This specific case continues to be of interest because of the unusual presentation, constellation of findings, and paucity of historical information. Ultimately the physical findings, posterior fornix tear and perforation of the colon, were not adequately explained.

The medical literature is sparse on the subject of posterior fornix laceration. Three papers from 1973, 2001 and 2006 describe this injury as resulting from aggressive coitus, including rape or sexual abuse. It can also result from an instrument inserted past the vaginal introitus, through the vaginal vault, finally exiting through the posterior fornix into the abdominal cavity.

## **Key Learning Points**

1. Rare disorders that present to medical doctors, obstetricians and general surgeons. All should be aware of the need to consider gynecologic trauma or conditions in girls and women in the absence of a history.
2. Bleeding may be sparse, absent, or profuse.
3. Shock may be a presenting sign.
4. Aggressive coitus and instrumentation can result in the finding.
5. Medical and surgical evaluation will likely identify the condition before a history is obtained.

## **Literature Summary**

1. Rush B, Milton PJD. Injuries of the vagina. South African Journal of Obstetrics and Gynaecology, July 28, 1973, pp 1325-1326.

Thirty-six cases of traumatic injury of the vagina were presented. Seven cases of patients ages 12 and under were associated with rape and two were non-coital. Attempted abortion and straddle injury were implicated. The histories in the cases were not described individually.

2. Pawanindra L, Mohan P, Sharma R, Sehgal A, Aggarwal A. Postcoital vaginal laceration in a patient presenting with signs of small bowel perforation: Report of a case. Surg Today, 2001; 31:466-467.

A 45 year-old widow, who lived with her sister, presented with 1 day of epigastric pain, vomiting, and abdominal distension. HR=100, Temp 38.5C. Abdomen distended with generalized and rebound tenderness and guarding. X-ray showed free air under the diaphragm. At surgery the bowel was normal but there was a 3 cm rent (tear) in the cul-de-sac. Repair was successful. She later disclosed the act of coitus prior to her symptoms.

Postcoital vaginal laceration is rare but known to gynecologists. Hemoperitoneum, prolapse of intraperitoneal structures, such as omentum, tubal fimbriae, and bowel through a tear can occur. The prepubertal vagina and postmenopausal atrophic vagina are susceptible. Tear of a normal ovary, rupture of a luteal cyst, and even liver tear have been described.

3. Sloin MM, Karimian M, Ilbeigi P. Non-obstetric lacerations of the vagina. J Am Osteopath Assoc. 2006; 106:271-273.

Four cases are presented with mechanisms of injury and a suggested treatment protocol.