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Research Letter

Swollen labia majora: An unusual presentation of occult inguinal hernia secondary to ovarian hyperstimulation syndrome

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Dear Editor,

A 23-year-old woman was admitted to our clinic with a diagnosis of moderate ovarian hyperstimulation syndrome (OHSS). After 2 days of uneventful hospitalization, severe fluid accumulation developed at her left labium majus within a few hours. Inspection revealed a swollen labium with skin discoloration and thinning of the overlying skin (Figure 1). She was pain free while stationary, however, movements were associated with mild discomfort.

Inguinal hernia was suspected and an examination was performed with Voluson E6 Ultrasound System (GE Healthcare, Little Chalfont, UK) using a convex 1–5-MHz probe. Inguinal scan revealed small bowel segments herniating through a defect in the abdominal fascia (Figure 1). A diagnostic conundrum was faced due to leukocytosis and mild abdominal pain; both being common symptoms of strangulated hernia and OHSS. Physical findings did not support incarceration, as she was pain free while stationary. Leukocytosis (leukocyte count: 23.434/mm^3) was present due to OHSS and it was deemed to be unrelated to hernia.

After diagnosis, she was placed on bed rest with mild elevation of the hip to avoid further accumulation of ascites underneath the labia majora. Skin necrosis and breakage of skin integrity were a concern. Speculatively, this would have resulted in free flow of ascites fluid through ruptured abdominal fascia and subsequently resulted in further herniation and incarceration of the bowel segments, akin to iatrogenic cord prolapse in cases of amniotomy with unengaged fetal head [1]. Her swelling improved with bed rest and ascites regressed with ongoing treatment. A human chorionic gonadotropin assay was ordered on Day 12 of embryo transfer and results were negative. After scheduling an elective hernia repair surgery, the patient was discharged from the hospital.

This case was unique due to presentation of the hernia as fluid accumulation under the labia majora. Unilateral involvement and anatomical cue led to suspicion, which was later confirmed by ultrasound. Occult hernias are difficult to diagnose with varying rates of sensitivity and specificity, depending on the diagnostic method used. Ultrasound, with 86% sensitivity and 77% specificity, is a practical and quick method of diagnosis [2]. Herniography is considered to be the gold standard test, however it is best avoided in patients with expected or ongoing pregnancy.

Occult and overt hernias without strangulation are usually expectantly managed until surgical correction is feasible. Especially during pregnancy, surgery is most often delayed until birth [2]. Our initial clinical experience is in conformity with this suggestion and woman with a possible impending pregnancy can be managed expectantly. Occult hernia is an underdiagnosed condition in women with chronic groin pain [3]. Labium majus is an important landmark for conditions of round ligament and direct inguinal hernias [4]. The association of labia majora and abdominal structures through the round ligament should be considered while evaluating labial conditions [5].

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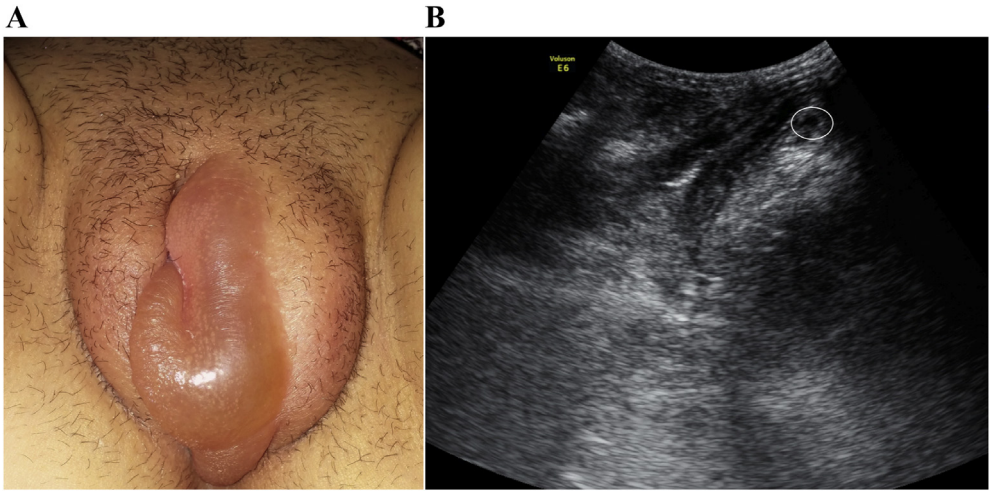

Figure 1. (A) A swollen left labium majora was seen with tense fluid accumulation underneath. Skin discoloration and thinning of the overlying skin were visible. Groin region of the patient was symmetrical and free of swelling. (B) Longitudinal view of the inguinal canal. Herniated small bowel segments appear medially to inferior epigastric artery (white circle). Color flow assessment failed to show pronounced blood supply. Clinical findings were not supportive of strangulation.

Conflicts of interest

The authors have no conflicts of interest relevant to this article.

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