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Research Letter

Rectal abscess during pregnancy

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Rectal abscess is a rare colorectal disease entity during pregnancy. We present an unusual case of rectal abscess that was diagnosed promptly and treated successfully.

A 32-year-old woman, gravida 2, para 1, presented to our emergency department at 29 weeks' gestation with a 1-week history of progressive throbbing pain in the perianal area. She remained afebrile throughout the course and denied rectal discharge or obvious change in bowel habits. Pertinent medical and obstetric history included prior cesarean section because of umbilical cord prolapse 2 years ago. Regular prenatal examinations during the current pregnancy had revealed nothing unusual.

Inspection of the perianal area revealed no evidence of hemorrhoids or signs of inflammation. Digital rectal examination revealed a painful mass at the posterior aspect of the rectum, about 7 cm from the anal verge. Copious purulent discharge with foul odor was drained by means of large bore needle aspiration. Culture of the exudate yielded Prevotella, *E*scherichia *coli*, and Enterococcus species.

Her symptoms were relieved after drainage. However, two days later, she presented to the colorectal clinic with resurgent symptoms of persistent anal discomfort despite administration of oral analgesics and antibiotics. A tender fluctuant mass was palpated on rectal examination, indicating reaccumulation of abscess. An endorectal ultrasonographic examination demonstrated a horseshoe-shaped rectal mass. After thorough explanation and preoperative survey of fetal status, emergency incision and drainage was carried out under spinal anesthesia with the patient in a modified Sim's position. The procedure was well tolerated by the patient and the fetus. There was no abscess recurrence during the remainder of the pregnancy. She gave birth to a healthy female baby by means of cesarean section at 38 weeks' gestation.

Among the colorectal diseases encountered during pregnancy, hemorrhoids are the most common [1,2]. Hemorrhoids may be either newly developed or exacerbated during pregnancy because of hormonal effect, increased intra-abdominal pressure, or compromised venous return of pelvic vessels because of a gradually enlarging uterus. As many as 35% of pregnant women suffer from hemorrhoids at some point during pregnancy [3]. In a retrospective study of 114 pregnant women who presented to our colorectal clinic because of persistent hematochezia refractory to medical treatment, 91.23% had hemorrhoids, 5.26% had anal abscess or fistula, 1.75% had colorectal cancer, and 0.88% had pseudomembrane colitis [4].

Rectal abscess is a relatively rare disease entity during pregnancy. The inflammation process usually begins at the mucocutaneous junction, and then spreads upwards, resulting in contiguous infection into the ischiorectal space. The predisposing factors include diabetes, immunodeficiency, ulcerative colitis, Crohn's disease, and pregnancy. Other than pregnancy, our patient did not have any of the abovementioned risk factors. She also denied receiving any procedures or using suppositories that may have caused abrasion or tear in the anal canal.

Ultrasound, computed tomography scan, and magnetic resonance imaging) can accurately diagnose rectal abscess [5-7]. However, magnetic resonance imaging is an expensive modality and in pregnant women computed tomography scan exposes the fetus to unnecessary radiation. Endorectal ultrasonography, therefore, represents the safest and most cost-effective modality for determining the existence, extent, and location of rectal abscess during pregnancy [8]. Hsu et al. reported that endorectal ultrasound could confirm and classify anal fistulous abscess in up to 90% of cases [9]. The modality not only can detect multiple lesions with good sensitivity, but also avoids the need for unnecessary surgical procedures.

In comparison with endorectal ultrasound, transperineal ultrasound uses a transvaginal ultrasound probe to obtain relevant images. The probe is smaller in diameter than an endorectal ultrasound probe, thereby causing less discomfort

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[10]. Furthermore, three-dimensional transperineal ultrasonography provides high spatial resolution and can clearly demonstrate morphologic characteristics.

After the diagnosis of rectal abscess is established, adequate management should be introduced promptly. When the internal opening is not apparent, Goodsall's rule may be used as a guide for surgeons. Nonetheless, it is not a substitute for scrupulous technique in clear identification of the direction of the tract and location of the internal opening [11].

Needle aspiration may also aid in locating the abscess and obtaining culture material. Adequate analgesia before the procedure may be needed, but sedation should be avoided or administered cautiously in pregnant women. In contrast to hemorrhoids, which should be managed conservatively, surgical intervention (e.g. incision and drainage) is mandatory in treating rectal abscess during pregnancy [12,13]. The technique can be executed safely under local or spinal anesthesia, with meticulous monitoring during the operation. In pregnant women, the lithotomy and jackknife positions may not be suitable especially when the operation is performed during the second or the third trimester. The left lateral decubitus (Sim's) position is a better choice for manipulation because it does not compromise maternal venous return. Careful exploration for other coexisting problems is necessary during incision and drainage to reduce recurrence.

In conclusion, rectal abscess during pregnancy is a rare entity that requires prompt diagnosis and treatment. Ultrasonography is an accurate, radiation-free, and cost effective method for diagnosing rectal abscess. An experienced team composed of multiple subspecialists including colorectal surgeons, obstetricians, and anesthesiologists is mandatory for successful treatment and outcome.

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