

Incarceration of a sessile uterine fibroid in an umbilical hernia during pregnancy

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Abstract On rare occasions, uterine fibroids complicate pregnancy. More commonly, fibroids exert a mass effect that either prevents implantation of an egg or becomes problematic as a fetus grows. Less frequently, pregnancies are affected by fibroid herniation through a fascial defect. Several publications describing herniation of pedunculated fibroids exist, two of which were in umbilical hernia sacs. There is, to our knowledge, only one publication describing the presence of a sessile uterine fibroid in an umbilical hernia. This case report adds to the literature by describing a 34-year-old primigravid woman with an umbilical hernia that contained a sessile uterine fibroid and provides parameters that can be used in the initial evaluation of a pregnant woman with an abdominal wall hernia.

Keywords Fibroid herniation · Incarcerated fibroid · Leiomyoma · Pregnancy · Sessile fibroid · Umbilical hernia · Uterine fibroid

Introduction

Uterine fibroids (leiomyomas) are considered benign tumors, with less than 1% undergoing malignant transformation. Although deemed benign, fibroids can cause pain, menorrhagia/metrorrhagia, and even infertility. If one remains fertile, fibroids can undergo rapid growth during pregnancy. In addition to problems that may arise as a result of increased size, complications can occur if fibroid herniation through a fascial defect occurs.

The first report of a uterine fibroid discovered in an inguinal hernia was published by Sherer et al. [4] in 1994. It was not until Ehigiegba and Selo-Ojeme's [1] publication in 1999 that the first case of fibroid incarceration in an umbilical hernia was reported. As was the tumor in the 1994 publication, the fibroid in Ehigiegba and Selo-Ojeme's report was pedunculated. In 2006, Uludag et al. [3] offered the first report describing the incarceration of a sessile fibroid in an umbilical hernia. In this publication, a 30-year-old primigravid woman in her 32nd gestational week was emergently brought to the operating suite for sudden onset pain associated with an incarcerated sessile fibroid. The woman reportedly presented with a palpable mass that measured 3 cm in diameter and did not change under compression. The fibroid was freed and was not resected. The fascial defect was closed, and the patient went on to deliver a baby girl via Cesarean section during her 38th gestational week. Below, we report what we believe to be the second recorded incidence of sessile uterine fibroid herniation through an umbilical defect during pregnancy.

Case report

A 34-year-old primigravid woman, at 29 weeks and 5 days gestational age by fetal ultrasound, was admitted with sudden onset abdominal pain. She reported an asymptomatic umbilical hernia that had been present for several years prior to her abrupt periumbilical pain. The patient denied nausea and vomiting. On physical examination, her abdomen was noted to be gravid, with a firm, tender, non-reducible mass at the umbilicus. Fetal ultrasound provided the above-stated gestational age, indicated that the fetal heart rate was 130 beats per minute, and estimated the fetal

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weight at 1,378 g. Given the sudden onset of her pain and our inability to reduce the hernia, the patient was brought emergently to the operating suite for umbilical herniorrhaphy under general anesthesia.

Just prior to making the incision, the hernia contents spontaneously reduced. After entering the sac, a gravid uterus was noted with an attached 3-cm sessile fibroid. Neither bowel nor omentum was seen in the vicinity of the umbilicus. Only a gravid uterus and its anteriorly positioned fibroid were visible through the fascial opening. The sessile fibroid was noted to be positioned directly beneath the fascial defect and appeared to be viable after its reduction (Figs. 1 and 2). For this reason, and the fact that it is generally contraindicated, no attempt to excise the mass was made. The fascial defect was repaired with a figure-of-eight stitch, and the overlying tissue was subsequently closed. The patient tolerated the procedure and there were no intraoperative complications. She was admitted for fetal monitoring and was

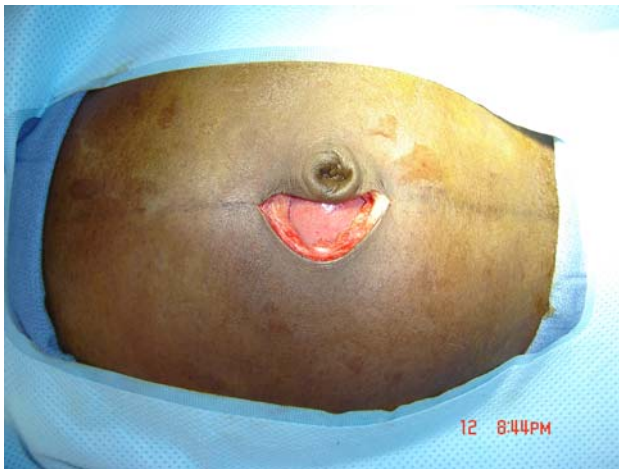


Fig. 1 Gravid uterus visible through infraumbilical incision



Fig. 2 Sessile uterine fibroid visible after reduction

discharged, after an uncomplicated recovery, on the third postoperative day. She eventually delivered a term male via Cesarean section and reports that, even though the baby was delivered after decreased fetal activity was identified, her child is now doing well.

Discussion

After reviewing the literature, which includes six case reports of fibroids contained in inguinal and umbilical hernias during pregnancy, all but one herniated fibroid were in primigravid women. The single exception was in a woman stated to have previously undergone elective termination of her pregnancy [4]. In addition to most commonly being identified during a woman's first pregnancy, fibroid herniation occurred in women ranging in age from 28 to 44 years [1–6]. Given these findings, we suggest increased suspicion for the presence of a uterine fibroid when evaluating a primigravid woman with an abdominal hernia who is 28 years of age or greater.

Three reports of fibroid presence in inguinal hernias were evaluated [4–6]. Of these, only two offered a gestational age at the time of onset [4, 5]. Both patients were at 20 weeks gestation when they were initially affected. Three reports of fibroid presence in umbilical hernias were evaluated [1–3]. Including our own patient, the average gestational age for umbilical herniation was 30.25 ± 1.79 weeks (range 28–32 weeks). While gestational age in those affected by the herniation of a uterine fibroid through an inguinal defect can potentially vary greatly given the anatomical position, it is likely to be more consistent when evaluating fibroid herniation through an umbilical defect. For this reason, an umbilical hernia in a pregnant woman of less than 27 weeks gestation (approximately two standard deviations below the above-stated mean) is unlikely to contain a uterine fibroid.

In writing this case report, we aimed to evaluate the reports of other herniated uterine fibroids and identify general themes that can be used in the evaluation of a pregnant woman with a hernia. In addition, we hoped to add to the present literature by presenting what we believe to be only the second reported case of sessile uterine fibroid herniation through an umbilical defect during pregnancy. It is our hope that this case report helps in the evaluation of pregnant women with hernias.

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