True Sacculation of the Pregnant Uterus

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Although rarely mentioned in the literature, true sacculation of the pregnant uterus is an important pathologic obstetric entity. The case of a 35-year-old Saudi woman is discussed in which a sacculated uterus was associated with fetal demise. The placenta was partially herniated into the sacculation located at the right cornu and demonstrated increta changes. The pertinent medical literature is reviewed.

True sacculation of the pregnant uterus is a rare occurrence in which a focal dilatation of the uterine wall occurs. Such a pouch is usually found on the upper surface of the uterus between the insertion of the fallopian tubes. True sacculation can be distinguished from functional sacculation by its permanence during the course of the pregnancy although it routinely involutes after gestation. The uterine sacculation, which may contain all or part of the products of conception, may communicate with the uterine cavity by a narrow or broad aperture and is formed by all layers of the uterine wall. Although many cases demonstrate normal progression to term, a case associated with fetal demise is reported below.

**Case Report**

A 35-year-old Saudi woman gravida six, para four, abortus one, living four, presented to the King Fahad National Guard Hospital Riyadh labour and delivery room complaining of left upper abdominal pain. She had not sought prenatal care and had not felt fetal movement for 1 week. On examination, the uterine size corresponded to term pregnancy with tenderness noted over the left cornu of the uterus. A palpable ovoid mass at the right cornu was thought at first clinically to represent a fibroid or possible bicornuate uterus. Fetal heart sounds were not heard and ultrasound scan confirmed fetal demise.

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Figure 1. True uterine sacculation in a 35-year-old Saudi woman was associated with a stillborn 4.0 kg fetus. True uterine sacculation results in a ballooning out of the uterine wall which may contain all or part of the conception.
On vaginal examination the cervix was long, thick and posterior. Several attempts to induce labour using prostaglandin, vaginal pessaries and syntocinon titration stimulation failed.

A Caesarian section revealed a thick lower segment and high breech presentation. A large right cornual saculation was confirmed on external uterine examination (Fig. 1). A 4.0 kg macerated fetus in breech presentation was extracted. The uterine wall at the implantation site in the dome of the saculation was markedly thin. A portion of placenta herniated into the saculation was also compressed to a paper-thin layer. The placenta was extracted with great difficulty. The saculation of the uterine wall remained without retraction despite uterine massage and ergot injection. Continued bleeding from retained placental tissue within and immediately adjacent to the saculation necessitated total hysterectomy. The patient made a complete and uneventful recovery.

Gross examination of the uterus and placenta documented the large right cornual saculation with paper thin wall (Fig. 2). The placenta was also markedly attenuated to a thin membrane over one-third of its surface corresponding to the portion which had herniated into the saculation. Increta changes at the margin of the saculation were demonstrated histologically.

**Discussion**

True saculation of the pregnant uterus must be distinguished from ‘classical’ saculation secondary to incarceration of the retroverted gravid uterus. True saculation is a ballooning of some portion of the uterine wall during pregnancy resulting in a very thin sometimes translucent walled sac which may contain part or all of the pregnancy. On the other hand, ‘classical’ saculation as first defined by Oldham in 1860 results from incarceration of the retroverted pregnant uterus with saculation occurring as a bulge of the anterior uterine wall (Fig. 3). The cervix is pulled progressively upwards as a cul-de-sac mass forms during the progress of the pregnancy providing the two classic physical findings of the ‘classical saculation’.

True uterine saculation generally presents little risk to the mother or fetus. Although saculation probably begins early in pregnancy it is usually discovered only at term after vaginal delivery or at the time of Caesarian section. If discovered early most authors agree that the pregnancy may be allowed to proceed to term under close observation. True saculation generally disappears postpartum and this involution is sometimes witnessed by the surgeon at the time of the Caesarian section or during the manual exploration immediately after delivery. The return of the
and even when sacculcation occurs in a scarred uterus it often involves a different site away from the scar. Cases associated with placenta increta may prove more difficult to treat and continued bleeding from the implantation site has been reported occasionally necessitating hysterectomy as in our case. Regardless of the aetiology, sacculcation remains a diagnostic challenge. True sacculcation appears to be relatively rare. In the 38 cases collected by Weisberg in 1972 the diagnosis was suspected in only two cases. Modern techniques including improved ultrasound should aid in correct diagnosis.

Awareness of the condition is also important as an aid to diagnosis. Persistent abdominal pain in pregnancy in a previously healthy woman provides a clue especially when associated with irregularities in the uterine contour. Obstetric ultrasound may be helpful; however, most often the diagnosis is suspected only during the manual exploration of the uterine cavity in the third stage of labour for retained placenta. Manual removal of placenta may be tried but the surgeon should be prepared for emergency laparotomy if needed.

References