

Recurrent Classical Sacculation of the Pregnant Uterus

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In 1860 Oldham¹ reported the unusual obstetric case of a woman who, at term with a desultory labor, was found to have a uterus that was completely retroverted, and her cervix was out of reach above the symphysis pubis. The stillborn baby was delivered by a manual cervical dilation and a difficult manual extraction. The uterus immediately returned to its normal position and contour. Because the anterior uterine wall was very thin, this condition was subsequently referred to as sacculation.

There have been only a small number of case reports of uterine sacculation. In 1972 Weissberg and Gall² reported a case of their own and reviewed the previous 37 cases. Only three of these cases of thinning of the uterine wall to form a saccule during pregnancy resembled Oldham's original case, which resulted from an incarcerated retroverted uterus.

In 1973 Fadel and Meisenhimer³ made a clear distinction between simple sacculation and sacculation of the uterus secondary to incarceration of the retroverted gravid uterus. They thought this distinction was clinically significant.

Simple sacculation, as illustrated in Figure 1, is a ballooning of some portion of the uterine wall during pregnancy.⁴⁻⁷ Probably present early in pregnancy,^{8,9} sacculation usually is not discovered until term after vaginal delivery or at the time of cesarean section.² The sacculation may contain any part or all of the pregnancy, and it disappears postpartum. This involution is sometimes witnessed by the surgeon during cesarean section or manual uterine exploration immediately after delivery.^{8,10} The return of the ballooned-out uterine wall to normal thickness and contour, however, may take as long as eight weeks.¹¹ The wall of the sacculation usually is quite thin, 2 or 3 mm at most. In some cases the uterine wall is so thin as

to be translucent.¹²⁻¹⁴ Distinguishing this condition from extrauterine pregnancy¹⁴ or uterine rupture is often difficult. The condition presents relatively little risk to the mother or fetus in the modern technological age; early detection is rare and should not lead to changes in management. Recurrence of simple sacculation has not been reported.

On the other hand, in cases of Oldham's, or classical, sacculation of the uterus (Figure 2) resulting from incarceration of the retroverted uterus, the saccule represents the anterior uterine wall.³ Because the fundus is not available to participate in the pregnancy, as it does in normal cases, the lower uterine segment must stretch and grow to accommodate the fetus. The pregnancy continues until the limits of this capability are met. The cervix is pulled up above the symphysis by this process, and vaginal delivery becomes impossible. Vaginal examination in late pregnancy shows a pelvic mass in the cul-de-sac, and the cervix is unreachable. As the pregnancy progresses, ultrasound examination is helpful, as the bladder is drawn up by the sacculating anterior lower uterine segment. The bladder, which becomes quite thin from anterior to posterior and very flat and wide from left to right, may be pulled superiorly as far as the umbilicus. This appearance of the bladder along with an undetectable anterior uterine wall at ultrasound is highly suggestive of classical sacculation. In these cases deliveries are often preterm and perinatal outcomes are therefore uncertain; several perinatal deaths have occurred.^{1,15,16} As in simple sacculation, the condition completely disappears postpartum. In contrast to simple sacculation, classical sacculation is known to recur.

There are now some 50 reported cases of sacculations of all kinds. Only eight of the women have had classical sacculations. In 1967 Wood¹⁵ reported a case of a woman with a double uterus who had recurrent classical sacculation, the first reported case of recurrent sacculation regardless of the classification. The case presented here is the second case of recurrence, the only such reported case in a woman with normal uterine anatomy. This case is also a good illustration of the distinguishing features of this type of sacculation.

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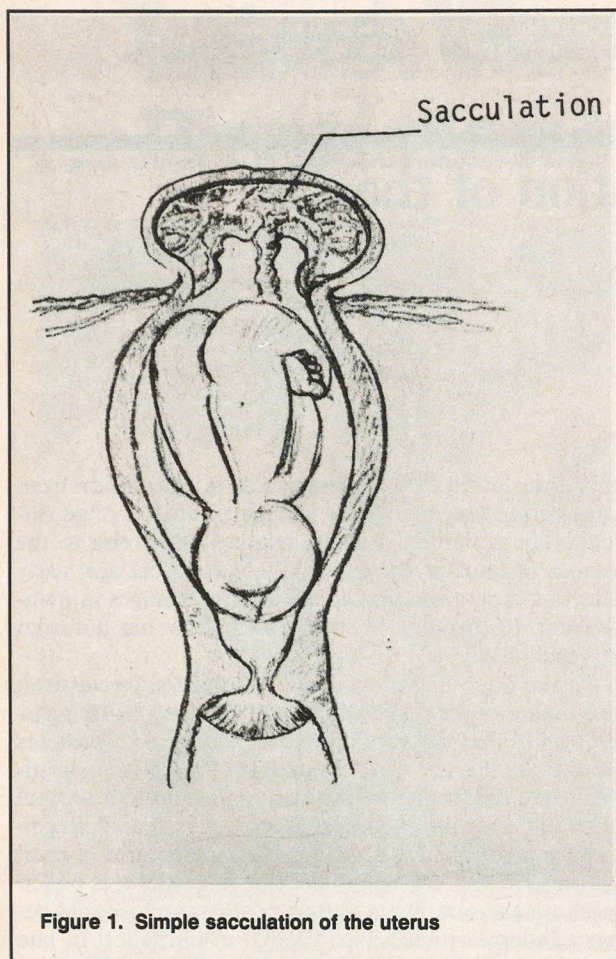


Figure 1. Simple sacculcation of the uterus

CASE REPORT

M.F. was a 27-year-old woman with her first pregnancy. She was first seen at eight weeks, when a pelvic examination showed a retroverted indeterminate-sized uterus. The fundal height lagged behind gestational age. Fetal growth, however, was steady and the pregnancy progressed without difficulty. At 31 weeks constipation developed, followed in several days by severe low back pain that radiated down both legs. Examination showed a mass occupying the cul-de-sac and obstructing the rectum. The cervix was high and unreachable. Abdominal x-ray examination confirmed the breech in the cul-de-sac and demonstrated marked hyperextension of the fetal neck. Ultrasound confirmed gestational age and failed to delineate the anterior uterine wall. Her symptoms persisted, leakage of amniotic fluid commenced, and early signs of pre-eclampsia appeared. At 32 weeks a cesarean section was performed. The fetus was contained in the thin-walled anterior uterus. The fundus of the uterus, containing the placenta, was retroflexed behind the fetus against the retroperitoneum. A viable 1,810-g male infant was delivered.

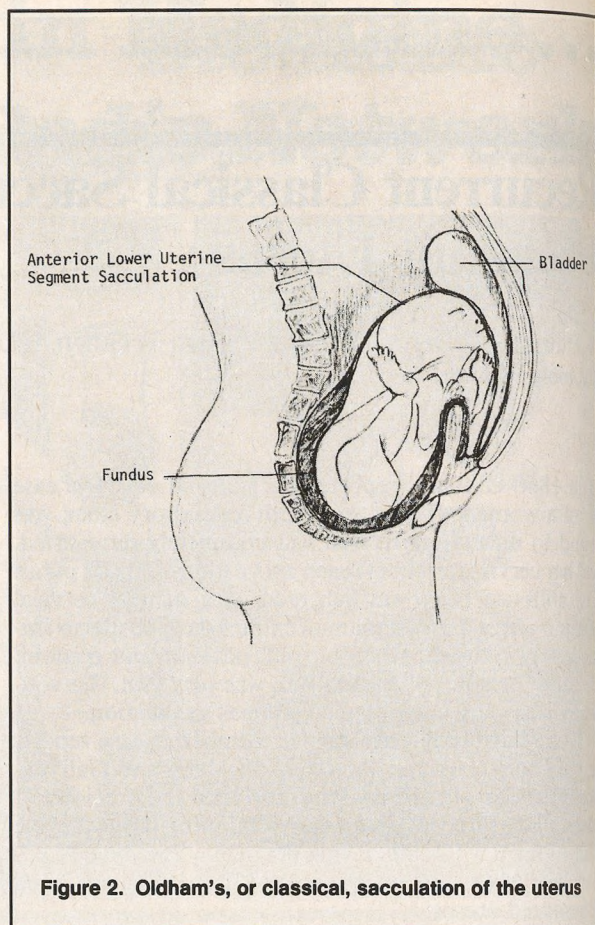


Figure 2. Oldham's, or classical, sacculcation of the uterus

Apgars were 3 and 5. The infant had a squared-off molding of the left skull, left-sided facial nerve palsy, and a pressure sore on the posterior neck. He was treated in the newborn intensive care unit and did well. Antibiotics and magnesium sulfate were administered to the mother postpartum, and she recovered without difficulty. A hysterosalpingogram done at six months postpartum was normal.

Four years later M.F. again became pregnant. Retroversion of her uterus was noted at her initial eight-week examination. Knee-chest exercises were performed, but by 16 weeks the uterus was incarcerated. The pregnancy progressed without difficulty until 32 weeks, at which time she developed urinary retention. This was treated with one-time catheterization. Several days later she developed uterine activity, which was suppressed with terbutaline. Vaginal examination showed a mass in the cul-de-sac and the cervix could not be reached. Ultrasound revealed a single breech fetus with an anterior placenta. At 33 weeks her membranes ruptured and a repeat cesarean section was performed. The fundus was again in the cul-de-sac. A large sacculcation involving the anterior lower uterine segment contained the infant and the placenta. A vigorous female infant was delivered and did well in the newborn

intensive care unit. The mother was treated with antibiotics for a urinary tract infection and recovered rapidly.

DISCUSSION

Retrodisplacement of the uterus in early pregnancy occurs in approximately 15 percent of women. This condition almost always corrects itself by 12 weeks. If it does not, the fundus of the uterus becomes impacted or incarcerated, and symptoms may occur. Symptoms typically are lower abdominal pain, urinary frequency, urgency, and occasionally overflow incontinence. The symptoms usually abate by 16 weeks. If the displacement is not corrected, however, spontaneous abortion often occurs, presumably because the circulation to the uterus is compromised. Rarely does the pregnancy continue and lead to sacculatation.

Gibbons and Paley,¹⁷ in their review of this topic, found that patients who were treated with uterine repositioning before 15 weeks did well unless abortion was a threat at the time of the treatment. Those beyond 15 weeks aborted shortly after this procedure.

If subsequent pregnancies occurred, these women were treated with pessary support and had normal pregnancies. One patient did not return for this intervention and developed a repeat incarceration, which was then treated successfully. Gibbons and Paley¹⁷ found the occurrence of incarcerated retroverted uterus to be about 1 in 3,000 pregnancies.

The issue of recurrence was especially important to the woman in this report. She was quite prepared to forego future pregnancies if the complication would recur. With the contribution of her case, it is now clear that classical sacculations carry more risk of recurrence than previously believed based on the literature, and abnormal pelvic anatomy is not necessary for recurrence.

It is important to recognize this risk of recurrence because of the observed efficacy of treating women with pessary in early pregnancy if they have experienced a previous incarceration of the retroflexed gravid uterus. This simple treatment, which carries little if any risk, could be em-

ployed to correct the position of the uterus before incarceration occurs and thus prevent the sacculatation or other complications associated with this problem. This treatment of observed efficacy in women with recurrence of uterine incarceration has yet to be reported in a woman with previous classical sacculatation. Since incarceration precedes classical sacculatation, however, it is the best logical approach and carries none of the risks involved in uterine suspension procedures that have been suggested by others.¹⁷

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