

PROLAPSE OF THE UTERUS IN PREGNANCY

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Uterine and vaginal prolapse in pregnancy are comparatively rare. Only 192 cases have been described up to the present time, besides 1 complete and 2 incomplete case records. In most of these cases the reports were brief and the degree of severity of the condition was not properly assessed. Furthermore no comprehensive appraisal of the condition from the onset of pregnancy to the stage of postpartum involution has been published.

In pregnancy gross hypertrophy of the cervix may occur. This is also found in prolapse and it may be difficult to differentiate one condition from the other. The custom of describing prolapse in 3 degrees should be adhered to in describing the condition in the pregnant state. Most records describe cases of the first degree, some of the second, and case descriptions of procidentia in the literature are rare although Keettel³ states that procidentia occurs up to the 7th month of pregnancy.

Prolapse does not seem to affect fertility adversely (Conant¹), despite statements by authors like Stabler.² According to Keettel,³ Kibel⁴ and Vigilante and Bellinger⁵ the incidence of the condition is one in 10,000-15,000 pregnancies, being 4-5 times more common in multiparous than primiparous women. In most of the reported cases pregnancy occurred in patients already suffering from prolapse. While it is held that previous pregnancies were responsible for the state of prolapse, the degree of multiparity does not seem to have any bearing upon its incidence, nor do previous forceps deliveries. Stabler and other consider any sudden strain during pregnancy, e.g. defaecation, a precipitating cause of venous stasis and thus of acute oedema of the cervix with extrusion in a few hours. It is, however, possible that there may be other unexplained factors.

Prolapse cannot occur during pregnancy unless there is relaxation and tearing of the structures which support the uterus, together with softening and elongation of ligaments and tissues such as the lateral cervical, pubocervical and uterosacral ligaments, the fascia of the pelvic floor, vaginal and perineal tissues, and possibly the round ligaments. Marked cervical changes follow secondarily on impaired venous return and exposure. These changes, which are due to hypertrophy and engorgement, a tendency for erosions to develop, and infection, cause gross enlargement of cervical tissues. These changes, moreover, may occur very quickly, even within a few hours or days.

The condition of descensus with its annoying and even incapacitative consequences can be expected to occur up to approximately the 12th week, when pregnancy has advanced far enough to lift the uterus out of the pelvis and the cervix into the vagina, but there are rather frequent exceptions. It usually lasts until the stage of labour, which is usually easy. There is a tendency for the condition of prolapse to recur after labour, when it is often worse than before.

The onset of prolapse is often sudden. Most writers feel that sudden strain is the precipitating factor, but we do not confirm this. In no recorded case was the onset associated with shock; medical aid was often not even sought for varying periods of time until the prolapse had become incapacitat-

ing or too painful (case 1). Prolapse often recurs repeatedly during the first 12 weeks of pregnancy and it may become irreducible. The fundus is sometimes lower than expected, but it is difficult to judge this before the 12th week, and the cervical protrusion with purple discoloration may be seen at the vulva.

Prolapse of the uterus in pregnancy can be divided into 4 clinical types, in order of frequency:

1. Cases with an early onset. These usually occur in association with pre-existing prolapse. In these cases remission is usually maintained after the uterus is lifted out of the pelvis.

2. Cases in which prolapse may persist throughout pregnancy. This is a rare group.

3. Cases which occur late in pregnancy.

4. Cases in which the uterus is pushed down, e.g. in the one case of ectopic pregnancy which developed a prolapse at the 16th week and which was only discovered at the 36th week, described by Morgan and Keevel.⁶

OBSTETRICAL COMPLICATIONS

Few conditions have so many possible obstetrical complications as prolapse of the uterus in pregnancy:

1. *Infertility*, which seems to occur only when prolapse is so marked that coitus is difficult, so that seminal pooling is impossible, or where chronic cervicitis exists. One patient, a religious objector to operation, had 4 successive pregnancies with a second-degree prolapse existing throughout.

2. *An increased abortion risk*, estimated at 15% by Gaetone and Labriola,⁷ thought to be due to cervical stasis and infection or temperature changes.

3. *Urinary difficulty* with severe infection (case 1).

4. *Irreducibility or incarceration of the uterus* possibly with urinary retention (case 2).

5. *Premature delivery*.

6. *Cervical dystocia*, which according to Stander⁸ often arises in prolapse occurring in late pregnancy, or when the prolapse was neglected, or when it is persistently present.

7. *Puerperal infection*, which was the cause of 8 of the 9 reported maternal deaths.

8. *The high rate of foetal mortality* which is described—up to 22% in Keettel's series.³

9. *The danger of inanition* which may result from possibly prolonged bed rest.

10. *Unexpected postpartum prolapse* (case 3).

It must be emphasized that most of these complicating factors may be avoided by early adequate treatment before and during pregnancy.

REVIEW OF LITERATURE

Keettel³ in 1941 analysed the 170 cases described to that date. Complete records existed in 140 cases; of these 124 were collected by Franke in 1892 (quoted by Keettel³). In Keettel's series treatment ranged from radical during the early days, to conservative in later times.

In 1911 Findlay⁹ advised therapeutic abortion and vaginal repair if the patient was incapacitated and if bed rest failed to control the condition, while Harris in 1912, quoted by

Keettel,³ advocated Porro-Caesarean section. Keettel recommended symptomatic conservative treatment with spontaneous delivery and he advised Dührssen's incisions if necessary or low forceps application; and in 1941 Stander⁸ recommended therapeutic abortion for incarceration. The methods of delivery in Keettel's collected cases were spontaneous in 35% of cases, forceps deliveries in 23%, Dührssen's incisions in 30%, version and extraction in 4%, craniotomy in 8%, and Porro-Caesarean section in 1%. There was a foetal death rate of 22% (due to operative intervention, prolonged labour and prematurity), frequent prematurity, and 14 cases of severe maternal sepsis with 8 deaths (before 1911 there were 6 such deaths with a 5% mortality rate and during the period 1911-1940 there was a mortality rate of 14%). One other maternal death was due to uterine perforation. The mortality rate for the whole series was 6.3%.

Subsequently 22 other cases were recorded, of which 10 full descriptions could be traced and analysed. All had spontaneous deliveries. The only death recorded was that of a foetus with a prolapsed and non-pulsating cord. In 1 case with an incarcerated uterus delivery took place nearly at term. In 2 cases prolapse existed before pregnancy. In one of these, prolapse occurred in the 6th week of gestation (she had a history of prolapse during a previous pregnancy) and, in the other, prolapse occurred in the 28th week. In 6, prolapse occurred between the 32nd and 38th weeks of gestation. All ten cases were treated conservatively with bed rest and pessaries where necessary; 3 recovered completely.

Klawans and Kantor¹⁰ make a strong plea for a rational and standardized approach throughout pregnancy. They added 4 case records in their valuable paper. In 2 cases a severe degree of prolapse existed before pregnancy and, in both, pessaries were used up to the 14th week. According to most writers prolapse after this stage is uncommon and yet it occurred repeatedly in both cases. Pessaries were then used throughout pregnancy and during labour until the cervix had dilated to almost 7 cm., i.e. virtually to its full extent. The pessaries were replaced immediately after labour to support the ligaments during involution. No infection was noticed before, during or after labour. Stabler and Conant disagree with the use of pessaries because of the danger of infection. Stabler preferred complete rest in bed for the first 3 months. After this period an occasional day in bed every week was sufficient. Vigilante and Bellinger report on a patient who had an abortion in the 22nd week during a previous pregnancy, and for whom a pessary could not be fitted then or now. She was confined to bed throughout the pregnancy and she gave birth to a mature infant without intervention. Stabler suggests that it is possible to amputate a cervix successfully during pregnancy; the parts heal surprisingly rapidly and cleanly after simple colporrhaphy. He does not recommend the full Manchester repair and considers that to do less would be useless.

TREATMENT

Wherever indicated the condition of prolapse in pregnancy must be treated, even in young women, because the results in further pregnancies and deliveries under adequate supervision are quite satisfactory. Episiotomy may be necessary to avoid sudden rupture of the anterior or posterior vaginal wall (Stabler). In pregnancy it is important to correct the prolapse as soon as possible for fear of incarceration or abortion; if the condition has an acute onset, rest in bed with its foot-end

raised will invariably reduce the oedema and the uterus can then be replaced into the abdomen after a day or two. Reduction under anaesthesia may be attempted if rest in bed fails to reduce the prolapse; such failure may however be an indication for therapeutic abortion in view of the dangers of foetal mortality, infection and dystocia. A subsequent repair operation should be performed if necessary. In some patients the condition persists or recurs, even after the 14th week. Good results have then been obtained both by using pessaries, usually of the Hodge type, under adequate supervision (which is less likely to disrupt the patient's everyday life), and by repeated or prolonged rest in bed (which is safer from the point of view of possible infection). During labour watchful conservatism should be employed; in many instances the cervix will dilate outside the body, when Dührssen's incisions and possibly the use of low forceps should suffice. The use of a pessary after returning the uterus to the abdomen after labour may be of great value, but it should not be allowed to be trapped by the involuting birth canal. Colpoplastic repair may be indicated after full involution, regardless of age and of whether the uterus is in the abdomen or not. In some older patients simultaneous hysterectomy may be considered. Some patients, particularly those with an unexpected spontaneous onset of prolapse, may recover completely after full involution.

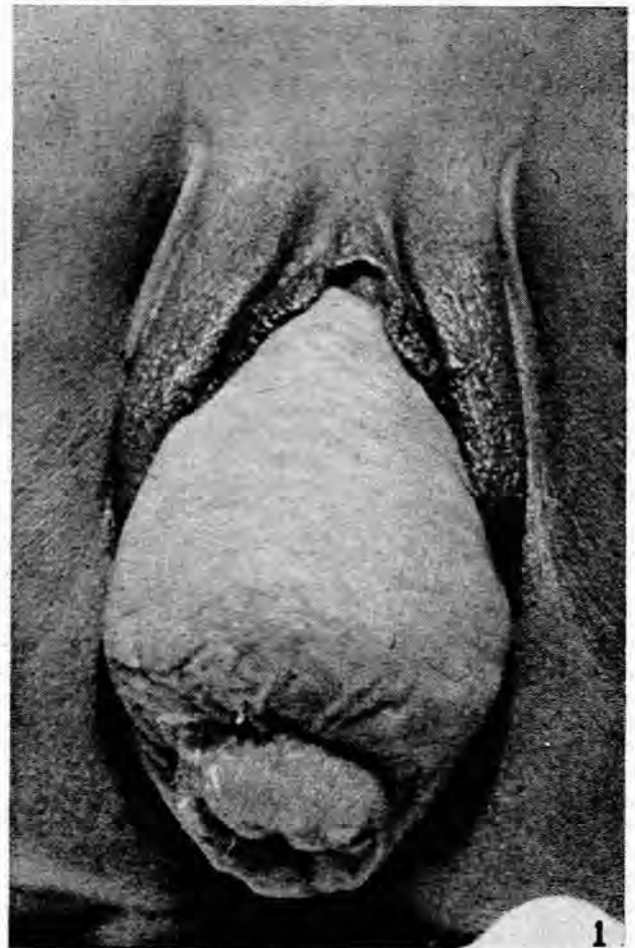


Fig. 1. Case 1.

CASE REPORTS

Case 1

A 24-year-old Coloured female was admitted on 14 February 1954 at the 28th week of gestation. She had one full-time normal delivery in 1952 with a bad tear which was stitched by her doctor. Soon after the present conception she noticed a protrusion at the introitus which gradually grew bigger and at 16 weeks her doctor inserted a pessary, which failed to improve matters (Fig. 1). For 3 months she experienced great difficulty with micturition. She had to push up the prolapse to initiate and complete the act, and she also complained of frequency and dysuria.

The patient was a healthy young woman with the fundus at 24 weeks. The cervix and part of the uterus were prolapsed outside the vagina; there was no cervical ulceration. The perineum was deficient. The urine contained numerous pus cells.

The patient was confined to bed and the prolapse repeatedly reduced. After 3 weeks she was allowed up. The blood-urea level had been 31 mg.% and the severe urinary infection responded only to chloromycetin therapy. Six weeks after admission she was sent to a convalescent home for 4 weeks, from where she was readmitted at 38 weeks. At 41 weeks she was delivered of a 7 lb. 12 oz. infant after a normal 18-hour labour. The puerperium was uneventful.

Five months after delivery she was readmitted complaining of 'something coming down', dyspareunia and stress incontinence. On examination a large cystocele, prolapse of the second degree, a large annular cervical erosion and a deficient perineum were found. A Manchester repair with buttressing of the bladder base was performed successfully. The histological examination of the cervix indicated chronic cervicitis. She was not seen again.

Case 2

A 28-year-old Coloured female presented on 24 October 1956 with sudden inability to urinate. She had had 3 normal full-term deliveries and was then 12 weeks pregnant. On examination her bladder was found to be distended to the umbilicus, the congested cervix protruded just beyond the vulva, and the prolapsed uterus was incarcerated. Catheterization was performed with some difficulty. The patient was then instructed to lie face-down with the foot of the bed raised and within a few hours the uterus lifted to the normal position. She was allowed up after a few days and discharged after a week. She also was not seen again.

Case 3

A 28-year-old Coloured female, who had had a normal full-term delivery previously, was admitted on 5 March 1954, 5 hours after a normal full-time delivery, complaining of 'something which dropped out after the delivery'. Examination revealed a prolapsed postpartum uterus (Fig. 2). Both the patient and the midwife stated that the prolapse occurred after delivery of the placenta. The uterine prolapse was reduced and the patient discharged. Two months later she was quite well and there was no sign of any genital prolapse.

SUMMARY

1. The rare condition of prolapse of the cervix and uterus in pregnancy is described, with a review of the literature. No previous comprehensive report in the literature could be traced.

2. Three case records are presented. The first is the record of a typical case; the second case presented with urinary

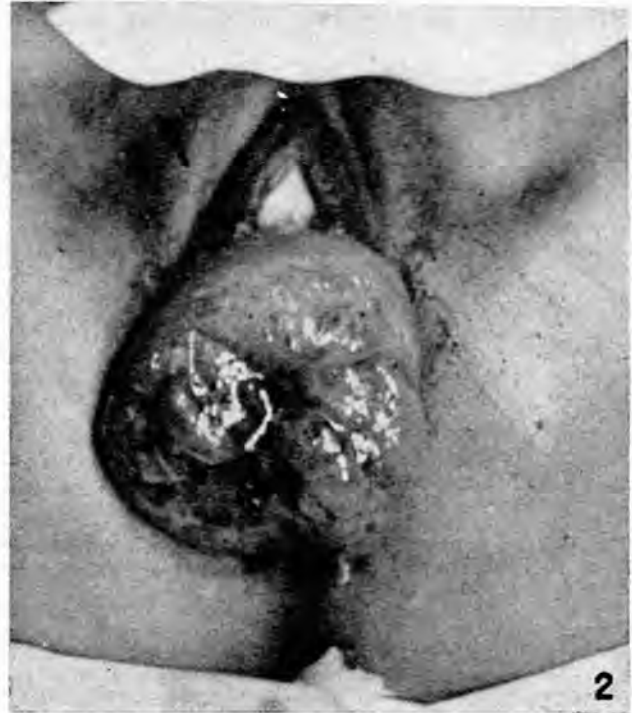


Fig. 2. Case 3.

obstruction, and the third with postpartum prolapse, which has not been described before.

SAMEVATTING

1. Die seldsame toestand van prolaps van die cervix en uterus met swangerskap word beskryf—vir die eerste keer sover vasgestel kon word. 'n Oorsig van die literatuur oor die onderwerp word verskaf.

2. Drie gevallestudies word aangeteken; die eerste is 'n tipiese geval, die tweede toon versperring van die urineweg, en die derde is 'n geval met postpartum prolaps wat, sover bekend, nog nie vantevore beskryf is nie.

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