OBSTRUCTED LABOUR CAUSED BY A VESICAL CALCULUS: CASE REPORT

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Obstructed labour is a well-known entity in maternity units, cephalo-pelvic disproportion being the most common cause. A rare example of obstructed labour is presented here, in which the cause was a large vesical calculus in a multigravid patient. As far as can be determined, this is apparently the first case of this nature to be recorded in South Africa and the sixteenth case to be recorded in the British and Continental literature.

Historical Aspect

The European literature from the 17th century onwards was reviewed by Hugenberger[1] in 1875. A total of 23 cases of bladder calculi in pregnancy were collected, with obstructed labour occurring in 11 cases. He added another 3 cases, from his personal experience, where spontaneous vaginal deliveries resulted following manual displacement of the calculi.

Bride[2] described a case in 1935 where the pregnancy was terminated by a caesarean section at the 36th week of pregnancy. The calculus was removed at a later date. Farncombe[3] described another case in the same year where spontaneous vaginal delivery of a 7-lb. infant occurred in the presence of a bladder calculus. Williams[4] (1945) reported 2 interesting cases where elm bark had been used early in pregnancy in an attempt to induce an abortion. (The elm bark had accidentally entered the bladder and had become the nucleus of a vesical calculus.) These calculi were removed during the pregnancies, both of which ended with a spontaneous vaginal delivery. Cope[5] recorded a case in 1961 where a vesical calculus was removed through a suprapubic cystotomy at the time of performing a caesarean section for obstructed labour.

CASE REPORT

The patient, a 33-year-old Coloured female, was admitted in strong labour to the Provincial Hospital, Uitenhage, on the morning of 13 August 1962.

Previous Medical History

The patient had been admitted in 1957 for acute urinary retention. No abnormalities had been found on either abdominal or vaginal examination. A cystogram was done.

Report. 'The superior margin of the bladder is irregular on its right side where a small diverticulum is present (marked "A" in Fig. 1). There are no similar filling defects to suggest malignant involvement.

'Similar but less marked changes are seen in the regions indicated by arrows marked "C" and "B" in Fig. 1. These features could indicate chronic cystitis. No radiological evidence of malignancy.'

Present Obstetrical History

1953 - 1958. Three spontaneous full-term vaginal deliveries. No abnormalities during pregnancy or labour. Birth-weights unknown. Apparently alive and well.

1959. Normal pregnancy. Labour commenced spontaneously at term. The patient was admitted 6 hours later. Abdominal palpation revealed that the presenting vertex had not yet entered the pelvis. On vaginal examination the cervix was found to be fully dilated, with a non-engaged vertex presenting. A hard mobile mass was palpable between the baby's head and the pubic symphysis. The mass was displaced manually after which the head descended into the pelvis. The infant was delivered with the aid of a Barnes' forceps. The birth-weight was unfortunately not recorded.

Previous Obstetrical History

The patient had no antenatal care. She was admitted at term, 5 hours after the spontaneous onset of labour. Her membranes had ruptured.

Examination on Admisssion

General. The patient was of small stature and not distressed. Her blood pressure and temperature were normal. Cardiovascular, respiratory and central nervous systems were all found to be normal.

Abdominal Palpation. The uterus was enlarged to the size of a full-term pregnancy. The foetus was presenting by the vertex. The presenting part was not engaged. The foetal heart rate was regular at 144 per minute. The infant was estimated to be of average size.

Vaginal examination. An attempt at passing a catheter was unsuccessful. The vulva was oedematous. The state of cervical dilatation could not be properly assessed as a result of a hard mass bulging into the vagina through the anterior vaginal wall. This mass could not be displaced out of the pelvis. No bulging membranes were felt. The provisional diagnosis of a low-lying cervical fibroid was made.

Treatment. As a normal vaginal delivery was impossible, an emergency caesarean section was decided upon. At operation the cause of the obstruction was found to be a hard rounded mass within the bladder. It was the size of a small orange, mainly situated in the left half of the pelvis and extending into the left iliac fossa. No other abnormalities were found. A

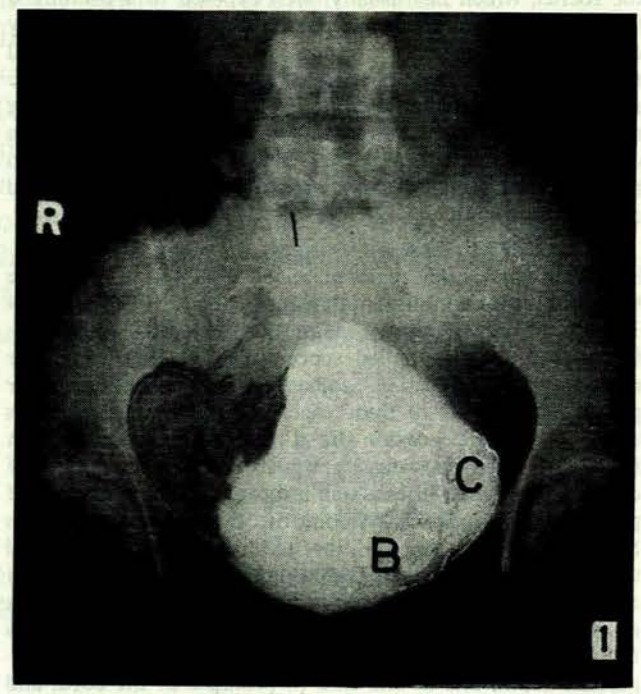

Fig. 1. Cystogram done in 1957, showing filling irregularities, probably indicative of stone formation (marked A, B and C).

routine lower-segment caesarean section was performed. A live healthy infant weighing 6 lb. 12½ oz. was delivered. The vesical calculus was left undisturbed. The postoperative course was uneventful. Spontaneous micturition was established soon after operation. An intravenous pyelogram was done before the patient was discharged.

Radiological report. 'A huge laminated stone is seen in the pelvis, consistent with a bladder stone. After injection of the dye, a right-sided hydronephrosis and hydrocalycosis as well as a hydronephrosis and hydrocalycosis of an ectopic left-sided kidney, overlying the left sacro-iliac joint is seen'. (Fig. 2.)

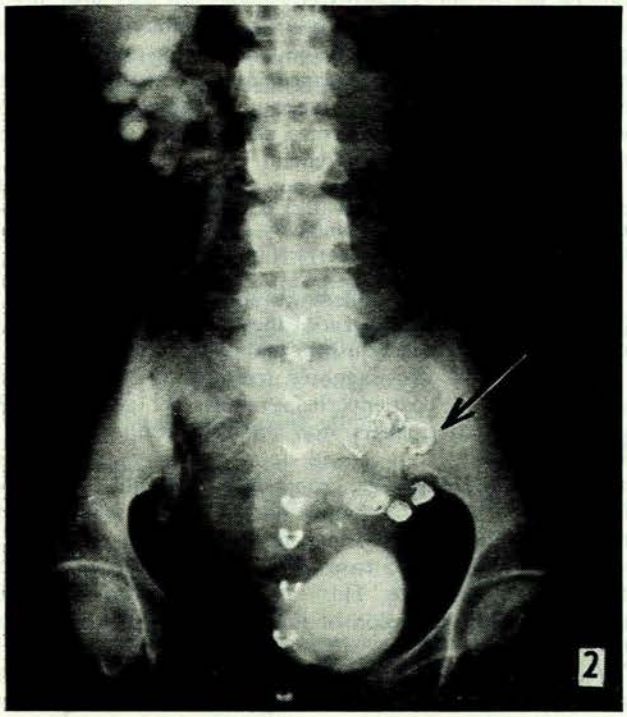

Fig. 2. Intravenous pyelogram done in 1962 after caesarean section, showing a large laminated bladder stone, hydronephrosis and hydrocalycosis on the right side and similar changes in an ectopic kidney on the left (indicated with an arrow).

Subsequent progress. The patient was re-admitted 2 months later for removal of the bladder stone. A large vesical calculus was removed. It was found to be lying in a wide-mouthed diverticulum on the left side. A tight fibrous stricture, probably congenital in origin, was present. The bladder neck was resected.

Pathological report. The specimen consists of an oval-shaped whitish calculus measuring approximately 5 cm. in its largest diameter (Fig. 3). Chemical analysis showed that the calculus consisted almost entirely of phosphates.

DISCUSSION

The case presented illustrates the progressive development of increasing obstruction in the vaginal delivery of 2 infants born in 2 subsequent pregnancies. This obstruction was caused by the presence of a vesical calculus which had gradually enlarged over a period of a few years. Apart from the 1 episode of acute urinary retention in 1957 there had been no further evidence of known pathology in the urinary tract until the delivery 2 years later, when a hard mass was discovered lying anterior to the vagina and preventing the engaging part from entering the pelvis. Vaginal delivery aided by a pair of Neville Barnes forceps

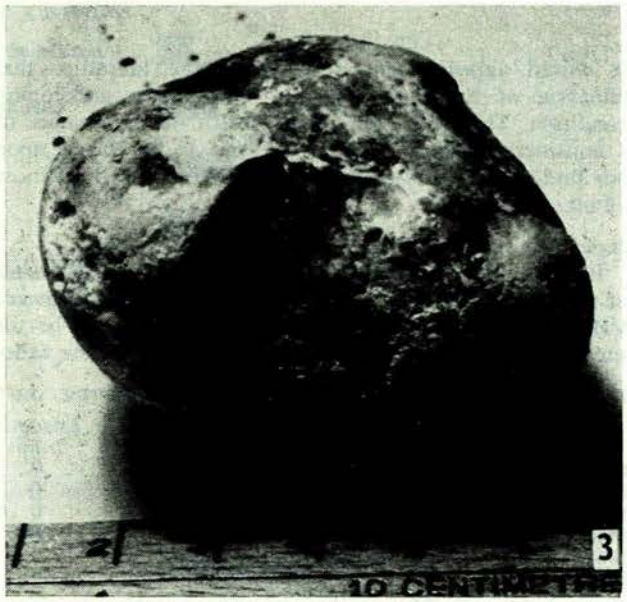

Fig. 3. Stone removed from the bladder 2 months after causing obstructed labour.

was effected after the mass had been displaced upwards. The patient unfortunately failed to return subsequently for investigation of the mass. It is likely that the mass, now larger in size, was responsible for the obstructed labour of the present admission, for which a caesarean section was necessary. This case clearly illustrates the importance of medical supervision in general and of regular antenatal care in particular. Had this been done in the case under discussion a caesarean section would not have been necessary.

SUMMARY

A case of obstructed labour caused by a vesical calculus has been described. The stone had probably been present for at least 5 years, during which time the patient had been pregnant 3 times. The last pregnancy was terminated by an emergency caesarean section. The importance of general and antenatal care is stressed. This is apparently the first such case recorded in South Africa.

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