

A case of rudimentary horn pregnancy that reached term

RUDIMENTARY HORN pregnancy is sufficiently rare as to warrant recording in every case. This is especially so when such a case has progressed to term. According to R.R. De Nicola and M.R. Petersen (1947), 90% of such pregnancies ruptured at between the fourth and fifth month and only 10% went on to term.

CASE RECORD

L.K.F. aged, 24, para 1, gravida 2, was first seen on 21 June, 1967, complaining of no foetal movement for the past week. Her last menstrual period began on 24 July, 1966. Her periods were normally regular coming on once every 40 days. She had one male infant, three years old; both the pregnancy and the labour were normal. She did not practise contraception.

Clinically she looked healthy. Systemic examination revealed no abnormality. The blood pressure was 110/80. Urine analysis showed no proteinuria nor glycosuria. Abdominally, a term-sized normal lying uterine ovoid presented. The uterus felt tense all the time, resembling that of an accidental haemorrhage. Foetal parts were difficult to make out. Foetal movement and heart sound could not be elicited. Vaginal examination revealed a normal vulva and vagina with no abnormal discharge. The cervix was not effaced, centrally situated and somewhat firm to the feel. The external os was closed. The presenting foetal part was roomy and gynaecoid. The diagnosis of intra-uterine death from postmaturity was made.

Management: It was decided to induce labour by the use of intravenous Syntocinon drip. This was

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instituted on three alternate days without success. On each occasion, the progress was assessed by a vaginal examination at the beginning and at the end of the day. Starting with five units in a pint of 5% dextrose, the rate and concentration were gradually increased until the concentration of 20 units at 40 drops per minute was reached. It was interesting to note that throughout the periods of the induction, the patient appeared comfortable, although on direct questioning she admitted to having felt a slight intermittent lower abdominal pain. Her blood pressure and pulse rate remained undisturbed.

Being chary to embark on an operative delivery of a dead foetus, it was decided to prime the uterus with stilboestrol (Jeffcoate, 1940). This was administered from 27 June until 2 July when the patient developed a low pyrexia. No obvious cause could be found. On 3 July, the case was reassessed. The one inexplicable feature that had become glaringly and tantalisingly obvious was the tense uterus in a comfortable patient. Vaginally, the previous findings were confirmed except now on rocking the firm cervix, which was surprisingly mobile, this mobility was not transmitted to the uterine mass (which was actually the pregnant horn). Pushing this mass upwards and to the right, the eight-week sized non-gravid uterus could easily be defined bimanually. A tentative diagnosis of an abdominal pregnancy was therefore made.

Laparotomy: On 4 July, after due preparation, including cross-matching of two pints of blood, a laparotomy under general anaesthesia was carried out. The abdomen was opened through a midline subumbilical incision. To our surprise, a normal looking 'gravid uterus' with no adhesions presented. Being fairly mobile and having enlarged the incision, the gravid sac was exteriorised. Attached to its lower pole was the right broad ligament. Into its right lower side, the distal ends of the right round ligament, Fallopian tube and ovarian ligament merged imperceptibly. To its left lower side, by a thickened fibrous band about one inch broad by ¼ inch thick, was attached a lob-sided asymmetrical uterus with its complement of the left tube, round ligament and ovary. The uterus was enlarged to the size of an eight-week pregnancy. The fibrous band was attached to the uterus at the level of its internal os. Excision of the entire pregnant rudimentary horn was easily accomplished. The pedicle of the left behind right ovary, round ligament and Fallopian tube was sutured on to the uterus to ensure stability. The post-operative recovery was uneventful.

Pathology: Dissection of the specimen revealed the muscular nature of the wall of the gravid sac. The foetus appeared normal externally. A section taken from the connecting band revealed on microscopy only strands of connective tissue.

Follow up: She promptly became pregnant again. On 16 June, 1968, she presented herself at term, labour pains having started five-and-a-half hours previously. She was delivered of a stillborn 20 minutes later, weighing 6½ lb. The foetal heart sound could not be heard at the time of her admission, and she volunteered the information that the foetal movement had ceased about a week earlier.

DISCUSSION

Rudimentary horn abnormality is usually found occurring on the right side in most of the recorded cases. Why this is so, no one has yet advanced a plausible etiology. Opinion is divided on the frequency of the presence of a communication between the cavity of the horn with the cervical canal of the uterus. Latta and Norman (1950) thought that this was present in almost all cases and that failure to find it might be due to the passage being obliterated by the growing tissue or by the fibrin formed from bleeding into the cavity. On the other hand, Bourgeois and Shapiro (1952) could only demonstrate this

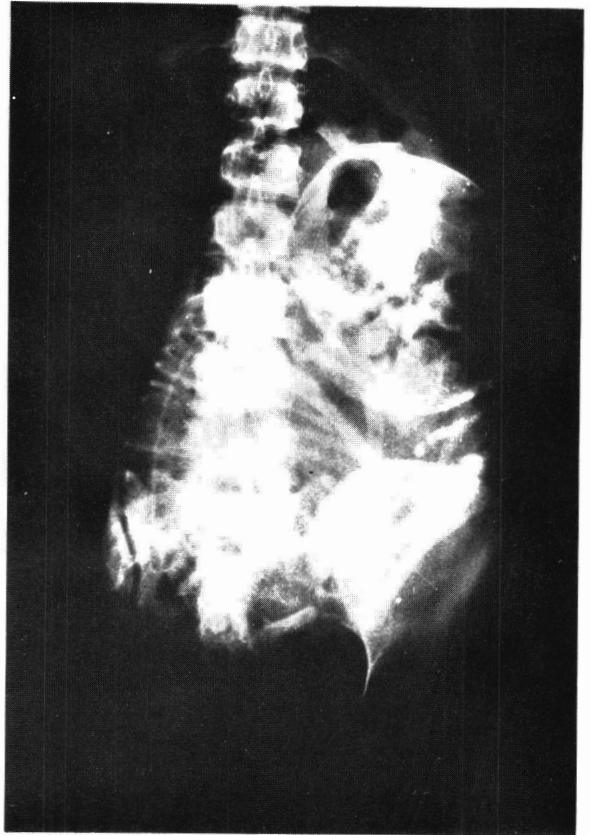


Fig. 1: X-ray of the abdomen — antero-posterior view showing the classical signs of intra-uterine foetal death.

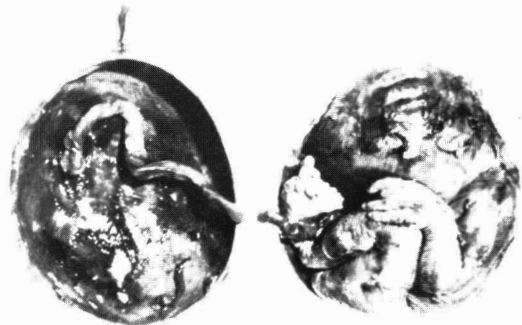


Fig. 2: Shows the foetus and the placenta on opening up the gestation sac.

RUDIMENTARY HORN PREGNANCY

in a small percentage of non-gravid specimens that had been dissected. Of Kehrer's 84 cases (quoted by Williams, 1945), 78% had no communication. When no communication was present, as in my case, it was presumed that pregnancy must have occurred by an external transmigration of the sperms. This would explain the rarity of such pregnancies.

Incidence: Since the first recorded case by Mauriceau and Vassal in 1669 (quoted by Mulsow, 1945) up to November 1962, a total of 328 cases have been collected (O'Leary, 1962). Using the Cumulated Index Medicus and the New Index Medicus, I have noted that there have been a further nine cases recorded. As with any rare conditions, a true incidence is difficult to ascertain. Roughly, pregnancy occurs in a double uterus once in every 5,000 pregnancies (Taylor, 1943). Eastman (1956) quotes an incidence of one per 15,000 for abdominal pregnancy, while Smith (1931) was able to uncover one case of rudimentary horn pregnancy in 141,946 deliveries at the New York Hospital.

Diagnosis: When a rudimentary horn pregnancy presents during the first trimester, it will be hard to differentiate it from a normal pregnancy complicated by an ovarian cyst or a pedunculated fibroid. Unlike tubal pregnancy, its gravid sac is rounded, firm, freely mobile and not tender on palpation (Abramson, 1958). When such a mass is on the right side, this possibility should certainly be thought of (Heinonen and Relander, 1961).

When a case of rudimentary horn pregnancy ruptured and continued to develop as a case of secondary abdominal pregnancy, there is usually a definite history of an acute-abdomen episode at about the fourth or fifth month (Bourgeois & Shapiro, 1952). Premature foetal death in the first

trimester can occur and is probably due to lack of or defective vascular supply or due to poorly formed decidua bed (Mackay & Ebringer, 1963). Sounding and hysterosalpinogram can be done to clinch the diagnosis when foetal death has occurred.

At term, tenseness of the gravid mass reminded one of the woody hard uterus of an accidental haemorrhage, except here the usual signs and symptoms of toxemia pain and anaemia are absent. The diagnosis in this case was initially missed because the tense uterus and the firm cervix were ignored. The mobility of the cervix was helpful and should be looked for when one encountered a cervix whose consistency was firmer than that expected from the period of gestation.

In almost all recorded cases, the diagnosis was made at operation or autopsy. Therefore, if correct diagnosis is to be made before complications occur, it must be based on suspicion. The advice of routinely doing a detailed careful vaginal assessment in all antenatal cases at the first visit and again at about the 36 weeks is a commendable practice and could result in the early detection of pregnancy abnormalities.

Management: In all cases, immediate treatment should be embarked upon on diagnosis or suspicion, because bleeding from a rupture at the fourth or fifth month can be and is often torrential and may lead to death. The only exception to this rule is in a case discovered near viability when one is justified to wait a few more weeks for the sake of the foetus.

At operation, a hemihysterectomy with the excision of its ipsilateral Fallopian tube should be carried out. Rupture of the subsequent intrauterine pregnancy as a result of such an operation is unlikely (De Rezende, 1954). Humpstone (1920) recommended removal of the accessory horn if this was encountered in the course of a gynaecological operation.

References

1. Abramson, M. — *Obst. & Gynec.* 11:446, 1958.
2. Bourgeois, G. & Shapiro, M. — *New Eng. J. Med.* 247:84, 1952.
3. De Nicola, R.R. & Petersen, M.R. — *Am. J. Surg.* 73:381, 1947.
4. De Rezende, J.M. — *Arch. brasil Med.* 44:259, 1954.
5. Eastman, N. — *Obstetrics* (ed.11) Appleton. New York, 1956.
6. Heinonem, J. & Relander, M. — *Ann. chir. et gynaec. Fenniae* 50:210, 1961.
7. Humpstone, O.P. — *Surg. Gynec. & Obst.* 31:501, 1920.
8. Kehrer, F.A. — *Inaugural Dissertation.* Heidelberg, Germany, 1900.
9. Latto, D. & Norman, R. — *Brit. Med. Jour.* 2:926, 1950.
10. Mackay, E.V. & Ebringer, A. — *Med. J. of Aust.* Vol. II 1963.
11. Mauriceau, F. — *Traite des Maladies des Femmes Grosses* (ed.6) 1721, T.I., 86.
12. Mulsow, F.W. — *Am. J. Obst. & Gynec.* 49:773, 1945.
13. O'Leary, J.L. & O'Leary, J.A. — *Obst. & Gynec.* 22:371, 1963.
14. Smith, F. — *Am. J. Obst. & Gynec.* 22:714, 1931.
15. Taylor, H.C. — *Am. J. Obst. & Gynec.* 46:338, 1943.
16. Williams, J.W. — *Textbook of Obst.* (ed.9) New York, Appleton, 1945.
17. Jeffcoate, T.N.A. — *Lancet* 1:1045–1048, 1940.