

TORSION OF THE PREGNANT UTERUS

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Torsion of the pregnant uterus is a very rare complication. Seigler and Silverstein are of the opinion that it occurs even more rarely than rupture of the uterus. The rarity of this condition and the fact that many of the standard text books on Obstetrics make no mention about it, justify the report of this case.

Case Report Patient R.R., primipara, aged nineteen years married in 1949, was admitted to Queen Mary's Hospital on 10-11-51 as a case of thirty-six weeks' pregnancy, with the complaints of weakness and pain in back and long bones, along with mild attacks of pain in the abdomen off and on. The patient had bleeding per vaginam during her third month of gestation for about eight days which responded to conservative line of treatment. Her menstrual history did not reveal anything abnormal except that she was having amenorrhoea from third week of February 1951. General examination of the patient revealed that she was a short statured woman of 56 inches. Kyphosis was noted at the dorso-lumbar region but no tenderness over the long bones could be made out. The abdomen was broader than long and pendulous. Fundal height was of 35-36

weeks pregnancy. Presentation was oblique and head was found to be ballotable in the right hypochondrium. Pelvic mensuration revealed the interspinous diameter to be 8 inches, intercrystal 9 inches, external conjugate $6\frac{1}{2}$ inches and transverse diameter of outlet $1\frac{1}{2}$ inches. Vaginal examination showed pubic arch to be narrowed and there was marked beaking of the pelvis present. Promontary could be easily reached and there was extreme degree of triradiation of the pelvis, which was confirmed by skiagram. Pathological examination revealed R.B.C.—3.7 mill./cmm. Hb—68%, serum phosphorous—3.2 mg./100ml. and serum calcium—9mg./100ml. Stool and urine did not show anything abnormal.

During her stay in the hospital she was treated for the acute symptoms of osteomalacia. On 19-11-51 she had an acute attack of pain in abdomen, rather severe in intensity and slightly relieved by morphia. The patient could not sleep for the whole night because of the pain. Neither painful uterine contractions nor vaginal bleeding were noted. The pain gradually subsided in the course of the next day or two under sedative

treatment. On 10-12-51 the patient started having labour pains and was prepared for classical caesarean section. The operation was done under ether anaesthesia and a live child extracted in a state of asphyxia from which it was brought around by clearing the air passages. After the uterus was closed in the routine manner it was noticed that on the left side the ovary was found to be situated in front of the tube. On further exploration, the uterus was found to have undergone a torsion of 180 degrees in the anticlockwise direction, so that the ovary presenting on the left side was really the right one. The uterus had therefore been opened on its posterior surface. The colour of the uterus and its adnexa appeared normal with no signs of strangulation, so the torsion was merely corrected manually and the patient sterilised. The reasons for sterilisation were two, namely, the patient was an advanced case of osteomalacia, and secondly there was also risk of dystocia in a subsequent pregnancy due to postoperative adhesions to the scar on the posterior wall of the uterus.

The above findings therefore are those of primary torsion of the pregnant uterus in an anti-clockwise direction in an osteomalacic patient.

Discussion:

Torsion of the pregnant uterus was first described by Hippiaer Columbi in 1662, an Italian veterinary surgeon, in cattle. Later on

Fleming also gave a detailed description of this complication in cattle with special reference to diagnosis and treatment. Its occurrence in human beings was first described by Virchow in 1862 at a postmortem examination.

Torsion of the uterus is one of the very rare complications of pregnancy, and this is borne out by the fact that in 1931 Robinson and Duvall could collect only 25 such instances in the European literature from 1894 to 1929, to which they added one case of their own. They are of the opinion that certain of the reported cases were not true examples of this complication, so that the number of genuine cases on record is still less than the above figure indicates. Later on many odd cases have been added in the literature. Day in 1933 reported two cases in which definite etiological factors were present. One case was due to a large ovarian cyst and the other to fibroids in the uterus. Both of the cases remained undiagnosed preoperatively. In 1934 Eastman recorded one case in a woman with a double uterus (uterus duplex, bicornis, cum vagina septum). Later on Reis and Chaloupka reported the first case where they claimed to have diagnosed the complication preoperatively. It occurred in a 25-year-old primiparous patient. The rotation took place at the junction of cervix and lower segment and the degree of rotation was of 135 degrees. Their diagnosis was based upon the fact that the round ligament was palpated through a thin abdominal wall as a stretched band running diagonally to the right upper side of the abdomen. Significantly the uterus was found to

be normal. Rigid cicatricial cervix of traumatic origin as an etiological factor in a case of 180 degree axial rotation of uterus of eight months gestation was reported by Javert in 1935. Caesarean section was performed to relieve the patient. Cor reported a very interesting case of axial torsion due to a large soft fibroid in the left wall of the uterus in two consecutive pregnancies. On both occasions caesarean section was performed. In 1945 Macleod reported a case of a patient aged 35 years where a three months gestation was complicated by an ovarian cyst lying in the hollow of the sacrum. The patient developed marked frequency of micturition and anxiety neurosis. The uterus here was rotated in a clockwise direction through 180 degrees and was "un-associated with any gross pathological changes." Hysterotomy was performed due to medical reasons only. Bell reported a case where also the rotation was of 180 degrees in a six months gestation. The condition here was recognised as some acute abdominal catastrophe. Immediate operative interference was effected and hysterectomy performed. Manhan and Coronado published two similar cases of early pregnancy where the uterus had undergone axial rotation of 180 degrees associated with fibroids. Both the cases were treated by hysterectomy. Axial torsion during labour was observed by Smith in a primipara at term. He misdiagnosed the case as impending rupture of uterus and caesarean section was performed. Seigler and Silverstein recently reported the first case of

torsion of uterus in pregnancy associated with rupture.

From the point of view of its etiology bicornuate uterus plays the chief predisposing role. This fact can be well substantiated from the finding that torsion of the uterus is more common in cattle where the uterus is bicornuate and has increased mobility in either direction due to absence of round and broad ligaments on one side; while on the other hand the normal human uterus is not free to rotate or move due to the anchoring action exercised by these ligaments. In further support of this it can be said that these pregnant horns of bicornuate uteri are larger and more elongated than normal ones, thereby increasing the chances of torsion. Other predisposing factors are fibromyoma in the upper part of the uterus, and ovarian cyst associated with pregnancy. Occasionally rigid cicatricial cervix can also be a predisposing cause as noted by Javert.

Primary torsion in which no pathological findings are observed in the uterus, on the other hand, is one of the rarest emergency conditions of gestation according to Seigler and Silverstein. In their opinion, in these cases "... transmission of body movement, filling degree of neighbouring organs especially bladder and lower intestines, may play a role." Robinson and Duvall believe that developmental asymmetry of uterine musculature is the essential feature where no apparent pathological findings are noted such as tumours or malformations. They are of the opinion that uterine abnormality is the essential

feature for the torsion to take place. The case under study falls into this category as no evidence of tumour or uterine malformation was detected. Here pendulous abdomen due to non-engagement of the presenting part as a result of extreme contraction of pelvis, plus uterine atony due to calcium deficiency might have been the contributing factors, and sudden body movement in the form of a twist or turn in bed might have precipitated the condition.

Torsion of the pregnant uterus can occur in either direction although it is more common in a clockwise direction. This preference can be explained easily on the basis that even during normal pregnancy a certain degree of dextrorotation of the uterus on its axis is present. The case cited here is of a rare type where the uterus twisted in the anti-clockwise direction through 180 degrees. In other reported cases the degree of rotation has been from 90 to 360 degrees although in one reported case it was upto 540 degrees, in which case, as was to be expected, the body of the uterus became necrotic.

The symptomatology of this complication is not at all characteristic, with the result that no case except one, and that too on the basis of palpatory findings, could be diagnosed preoperatively. However in cases where torsion takes place suddenly the condition resembles abruptio placenta without any vaginal bleeding. In torsion of gradual onset, pain in abdomen is usually associated with tenderness which is restricted to the uterus

only, and is usually on the side of the twist of the uterus. The case under study though characterised by the history of acute attack of pain and absence of vaginal bleeding, remained undetected till caesarean section was performed for extreme degree of pelvic contraction. The diagnosis was missed due to the rarity and unfamiliarity of this complication.

The absence of vaginal bleeding has been much emphasised by Seigler and Silverstein in diagnosing this condition, and they suggest that torsion of pregnant uterus should be included in the list of differential diagnosis in the emergency conditions of pregnancy where there is absence of vaginal bleeding.

The treatment of this complication depends upon the state of the uterus, age, and parity of the patient. In cases where the uterus has become necrotic or threatening to become so, nothing short of hysterectomy is indicated. In the rest of the cases manual correction can be undertaken depending upon the judgement of the operator.

Summary And Conclusions

1. One more case of primary torsion of pregnant uterus has been added to the literature.
2. It is a very rare complication of pregnancy and should be kept in mind in differential diagnosis in emergency states of pregnancy where there is absence of vaginal bleeding.
3. The unusual features of this case were, that it was associated with

osteomalacia which might have been the contributing factor in causing this complication.

4. The torsion was in anti-clockwise direction and was not associated with any tumour or uterine malformation.

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