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Cervicoisthmic Pregnancy- A Catastrophe

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Abstract
Background
The cervico-isthmic pregnancy has an incidence of 1:1,800–1:2,200 pregnancies[1, 2]although the exact incidence is unknown because of the fewer cases reported in literature[3].
Case report
A 28yr old female patient was admitted as a case of G2P1 at 9 weeks with previous caesarean section with cervicoisthmic pregnancy. There was no response to medical therapywith methotrexate and hence patient was offered feticide by USG guided intracardiac injection of KCl. Eventually the patient needed evacuation with manual vaccum aspiration for removal of products of conception in view of bleeding per vaginum. However, as the pregnancy was no longer viable the bleeding was limited.
Conclusion
The fate of a cervico-isthmic pregnancy cannot always be predicted. It may grow predominantly towards the uterine cavity and end in a live pregnancy or may grow towards the cervix, practically behaving as a cervical pregnancy. This creates a dilemma regarding optimal management of such a pregnancy.
In this study we have highlighted the safe and effective role of manual vacuum aspiration in the management of such pregnancies after intracardiac injection of KCl. It is thus prudent to establish an early diagnosis in pregnancy to facilitate early intervention thus avoiding catastrophic complications.
An early diagnosis and an immediate management is necessary to avoid serious complications of cervico-isthmic pregnancy, thus allowing fertility preservation.

Key words: *Cervicoisthmic pregnancy, methotrexate, manual vaccum aspiration.*

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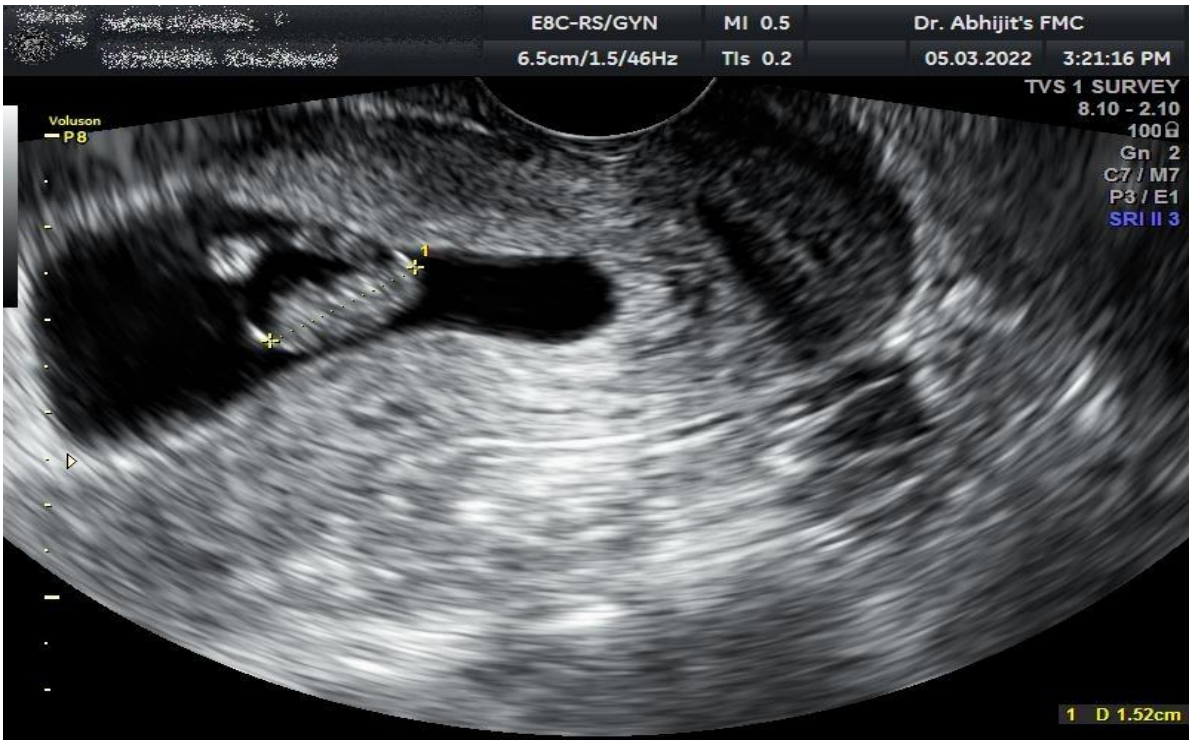
I. Introduction

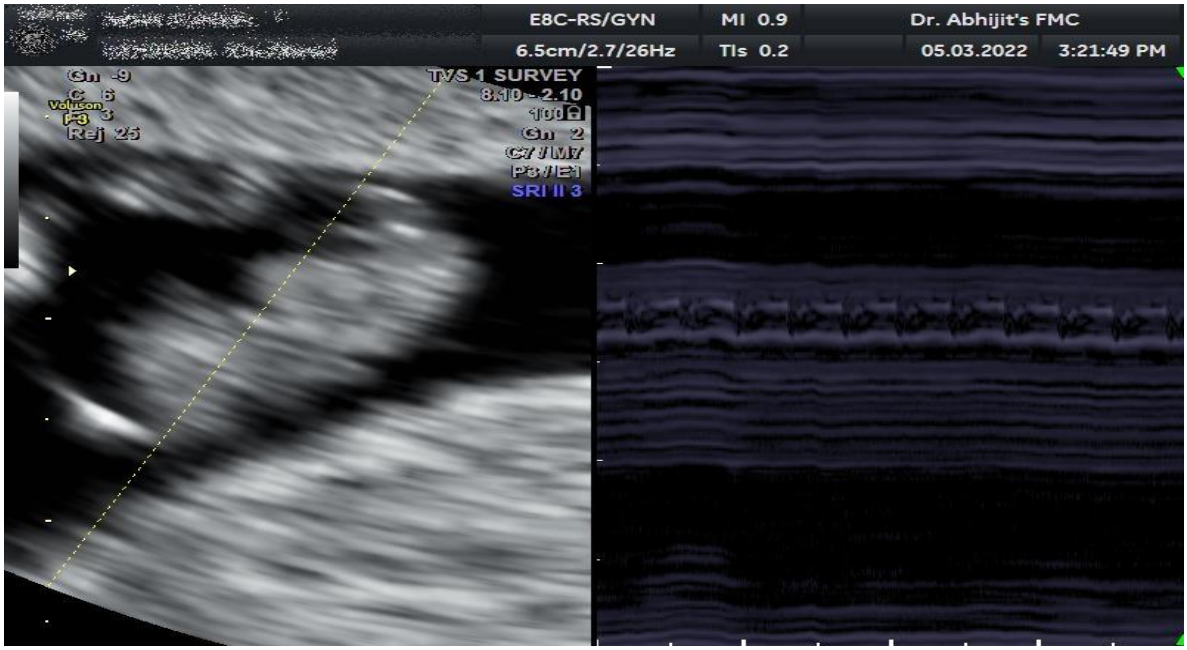
The cervico-isthmic pregnancy has an incidence of 1:1,800–1:2,200 of pregnancies[1, 2], although the incidence is unknown because of the fewer cases reported in literature[3]. Among the ectopic pregnancies, these are considered the rarest kind of ectopic pregnancy and can result in catastrophic complications[3]. Such a pregnancy may result in a spontaneous miscarriage in the first or second trimester of pregnancy, or preterm delivery[4,5], uterine rupture, massive haemorrhage, hysterectomy resulting in loss of fertility and maternal mortality.[6]

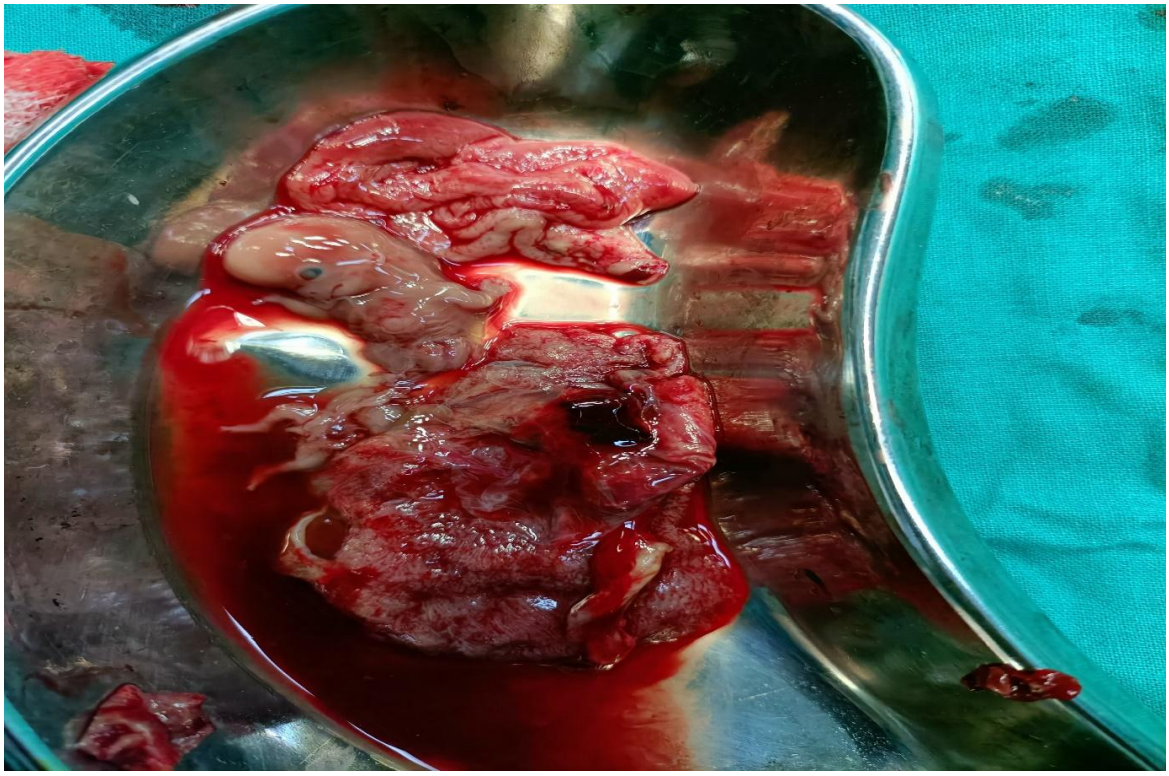
During the first trimester of pregnancy, the cervix is limited cranially by the internal os, which can be defined in two ways: histologically or anatomically. Histologically, the internal os is the transition point from the endocervical mucosa to the isthmic mucosa that resembles the corporal mucosa although thinner and richer of supporting tissue. The anatomical internal os, which is the zone of transition between isthmus and uterine corpus, is located 5 to 16 mm cranially to the histological os. Therefore, during the first trimester, ultrasonography cannot distinguish the transition between isthmus and cervical canal, but only between isthmus and uterine corpus[7]. From the 12th week onward, the isthmus progressively unfolds into the uterine cavity, which is occupied by the gestational sac, and takes the name of lower uterine segment[8]. Normally, the gestational sac implants on the uterine corporal decidua, and only during the second trimester does it occupy the space of the widened isthmic canal. In a cervicoisthmic pregnancy, the implantation may occur in the region of the isthmus, invariably extending into the cervix.

II. Case Report

A 28yr old female patient was admitted as a case of G2P1 at 9 weeks with previous caesarean section with cervicoisthmic pregnancy.Early ultrasound revealed a live cervico-isthmic pregnancy with chorionic tissue partly embedded in caesarean scar. Since patient was stable patient received two doses of injection methotrexate. However, there was no response to medical therapy, hence patient was offered feticide by USG guided intracardiac injection of KCl. Thereafter patient was observed. Patient had complaints of bleeding per vaginum subsequently. Thereafter with due risk, patient underwent a manual vacuum aspiration for removal of products of conception. Postoperative period was uneventful.







III. Discussion

The fate of a cervico-isthmic pregnancy cannot always be predicted. It may grow predominantly towards the uterine cavity and end in a live pregnancy or may grow towards the cervix, practically behaving as a cervical pregnancy. This creates a dilemma regarding optimal management of such a pregnancy.

Two different hypotheses have been proposed for the origin of cervico-isthmic pregnancies. According to the first one, the gestational sac implants in the lower part of the uterine corpus, with a subsequent extension of the implantation site into the isthmus and cervix . An alternative hypothesis suggests that the original implantation occurs in the cervix, and subsequently it extends above the internal cervical os into the lower uterine segment . According to the latter hypothesis, the process could resemble the normal implantation process, i.e. with progressive incorporation of the lower uterine segment into the uterinecavity , with the difference that it would start from the cervix upwards rather than from the uterine cavity downward. Independently from the causative hypothesis, a weakness of the internal cervical os has been claimed to play a role in the pathogenesis of cervico-isthmic pregnancies.

Ultrasonographic identification of the implantation site, accurate clinical judgement can go a long way in deciding the appropriate line of management.

Various methods have been proposed including a mini-laparotomy incision in order to remove the gestational tissue by excision, a conservative treatment followed by a trans-arterial embolization of bilateral uterine arteriesperformed to avoid intraoperative hemorrhage and postoperative bleeding, a suction curettage with Karman's cannula under transabdominal ultrasonographic guidance and medical management with Methotrexate.

In this study we have highlighted the safe and effective role of manual vacuum aspiration in the management of such pregnancies after intracardiac injection of KCl. It is thus prudent to establish an early diagnosis in pregnancy to facilitate early intervention thus avoid catastrophic complications, thus allowing fertility preservation.

IV. Conclusion

The fate of a cervico-isthmic pregnancy cannot always be predicted. It may grow predominantly towards the uterine cavity and end in a live pregnancy or may grow towards the cervix, practically behaving as a cervical pregnancy. This creates a dilemma regarding optimal management of such a pregnancy.

In this study we have highlighted the safe and effective role of manual vacuum aspiration in the management of such pregnancies after intracardiac injection of KCl. It is thus prudent to establish an early diagnosis in pregnancy to facilitate early intervention thus avoiding catastrophic complications.

An early diagnosis and an immediate management is necessary to avoid serious complications of cervico-isthmic pregnancy, thus allowing fertility preservation.

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