

Tubal Ectopic Pregnancy 4 years after hysterectomy: a case report

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Abstract

Background:

Ectopic pregnancy after hysterectomy is a rare event. To date there are 73 definitive cases of post-hysterectomy ectopic pregnancy. The first case was reported by Wendler in 1895.

Case:

A 31 year old P2G4 (one miscarriage) presented with a history of severe lower abdominal pain of three days duration. She previously had a subtotal hysterectomy four years prior her current presentation for a septic miscarriage with multiple organ dysfunction.

She had a background history of being HIV reactive on antiretroviral therapy initiated two days before her presentation. Her CD4 count was 54 cells/uL, negative cryptococcal latex test. She was first diagnosed with HIV in 2015, however had not been on antiretroviral therapy since then.

On clinical examination she was hemodynamically stable, normal blood pressure and pulse, afebrile and no stigmata of AIDS. She had an acute abdomen and on pelvic examination a cervical stump was palpable with no blood from the cervical os. Her haemoglobin was 13.4g/dl. Urine pregnancy test was positive. Her quantitative beta-HCG of 3979 IU/L.

Pelvic ultrasound showed fluid collection in the pelvis, no definite masses seen, no uterus seen and ovaries could also not be visualised.

Abdominal ultrasound did not show any abnormalities in the rest of the abdomen.

The patient was counselled for surgery. Preparation with multidisciplinary consultation was done.

Intraoperatively, 100ml haemoperitoneum was found. There were dense pelvic adhesions. Adhesiolysis was done and a bleeding right fallopian tube ampullary pregnancy was found. The right ovary was grossly normal. The contralateral adnexa could not be identified. A right salpingectomy was done. Total blood loss was 100ml.

She recovered well post operatively and was discharged three days later to continue her antiretroviral therapy.

Discussion:

A rare case of tubal ectopic pregnancy after hysterectomy is presented.

Access to the peritoneal cavity and fallopian tube through the cervical canal, we postulated as the mechanism in this case.

Ectopic pregnancies after hysterectomy are classified into early and late. The former being associated with a pregnancy (or viable gametes) that was present at the time of hysterectomy. These present soon after the hysterectomy. The latter present long after the hysterectomy.

Conception can occur after hysterectomy through access via a prolapsed fallopian tube, a fistula or defect in the vault. Cervical stump pregnancy is also described. Surgical intervention is the most common intervention described amongst the case reports.

Conclusion:

Pregnancy after a hysterectomy is a rare possibility with possible adverse outcomes. Clinicians must have a strong index of suspicion for a possible ectopic pregnancy in patients that present with abdominal pain after hysterectomy.

Background

Ectopic pregnancy after hysterectomy is a rare event. To date there are 73 definitive cases of post-hysterectomy ectopic pregnancy. The first case was reported by Wendler in 1895.¹

The 73rd case which was a cervical stump ectopic pregnancy was reported in Ethiopia by Ahmed et al in 2019.²

Case presentation

A 31 year old P2G4 (one miscarriage) presented with a history of severe lower abdominal pain of three days duration. She presented to a local primary health clinic and did not disclose the history of having had a subtotal hysterectomy four years prior her current presentation. The hysterectomy was done for a septic miscarriage with multiple organ dysfunction.

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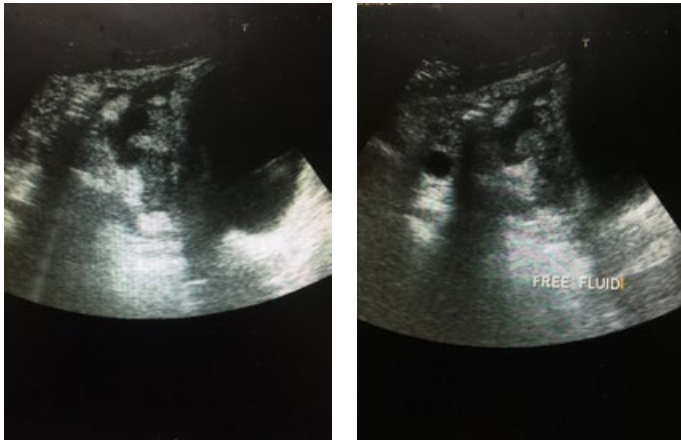


Figure 1: Ultrasound images showing the bladder on the right side of the images and clots on the left of the images. No uterus visible.

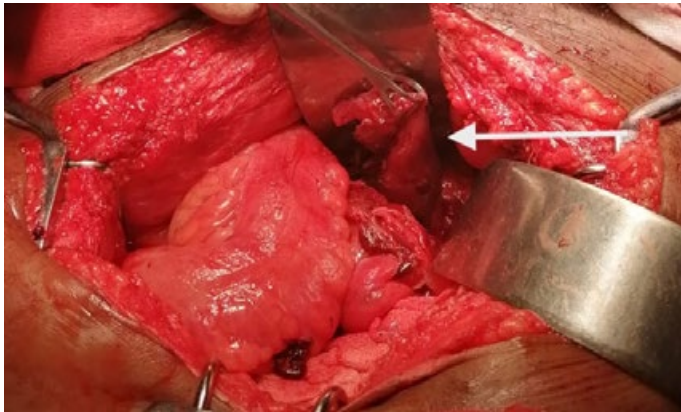


Figure 2: Right fallopian tube after adhesiolysis

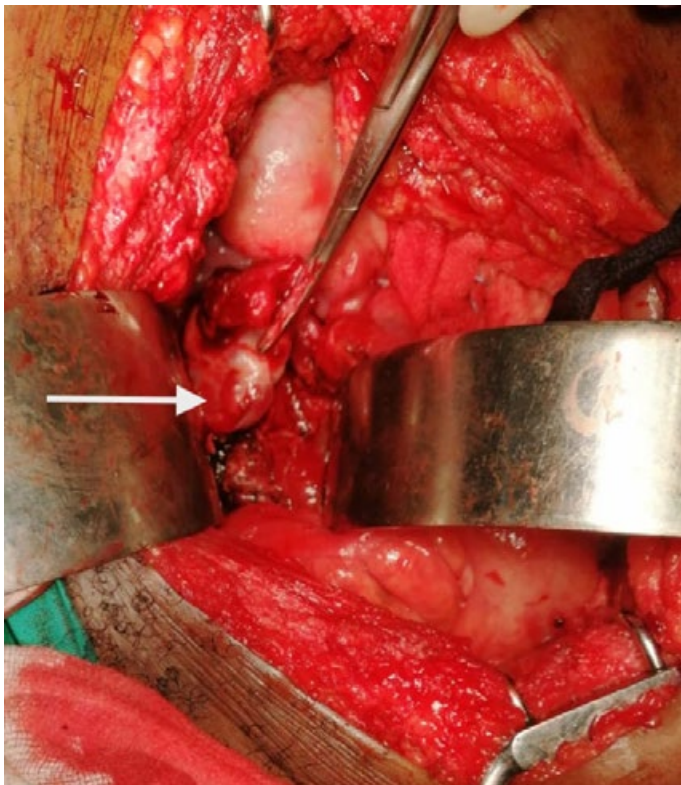


Figure 3: Right ovary after salpingectomy

A urine pregnancy test was done at the clinic and it confirmed a pregnancy. She was then sent to our centre for suspected ectopic pregnancy.

She had a background history of HIV infection on antiretroviral therapy initiated two days before her presentation. Her CD4 count was 54 cells/uL, negative cryptococcal latex test. She was diagnosed with HIV in 2015, however had not been on antiretroviral therapy since then.

On clinical examination she was hemodynamically stable, normal blood pressure and pulse, afebrile and no stigmata of AIDS. She had an acute abdomen and on pelvic examination a cervical stump was palpable with no blood from the cervical os. Her haemoglobin was 13.4g/dl. Urine pregnancy test was positive. Her quantitative beta-HCG was 3979 IU/L.

A pelvic ultrasound showed fluid collection in the pelvis, no definite masses seen, no uterus seen and ovaries could also not be visualised.

Abdominal ultrasound did not show any abnormalities in the rest of the abdomen.

An assessment of ectopic pregnancy post hysterectomy was made.

The patient was counselled for surgery. Preparation with multidisciplinary consultation was done.

Intraoperatively, 100ml haemoperitoneum was found. There were dense pelvic adhesions involving the bladder, bowel and adnexae. No macroscopic fistulous tract was observed. Adhesiolysis was performed and a bleeding right ampullary ectopic pregnancy was found. The right ovary was grossly normal. The contralateral adnexa could not be identified. A right salpingectomy was done. Total blood loss was 100ml.

She recovered well post operatively and was discharged three days later to continue her antiretroviral therapy.

The histopathology examination confirmed a tubal pregnancy.

Discussion

Pregnancy after hysterectomy is a very rare occurrence. We postulate that there may have been a fistulous tract allowing passage of spermatozoa into the peritoneal cavity.

Post hysterectomy ectopic pregnancies occur either early after a hysterectomy or many years later.³

Early post hysterectomy ectopic pregnancy occur if there is a luteal phase pregnancy at the time of hysterectomy.³ The fertilised ovum is in transit to the uterus. The other possibility is the presence of spermatozoa in the fallopian tube when the hysterectomy is performed. Diagnosis in this case may be delayed by the pursuit of other likely causes of pain post hysterectomy such as vaginal cuff infection, pelvic hematoma etc.

It is therefore recommended that a hysterectomy be performed in the pre-ovulatory phase or after effective contraception.²

Late occurring post hysterectomy ectopic pregnancy occur as a result of a fistulous communication between the vagina and the peritoneum.

50% of these follow vaginal hysterectomy.^{3,11} This may be due to proximity of the fallopian tube to the vaginal cuff at closure of the vaginal vault.

15% (11/72) of the hysterectomies in a review by Fylstra were subtotal hysterectomies.³ There can be direct communication between the cervical canal and peritoneum through a fistulous tract.

The fistulous tract can be macroscopic or microscopic. Sobczyk reported a surgically created and later cauterised fistulous tract.⁴ Babikian describes a macroscopic tract, pin hole sized between the cervix and peritoneal cavity which was observed at laparotomy for a post hysterectomy ectopic pregnancy.⁵

The commonest presenting complaint is abdominal pain.²⁻⁹

Due to the history of hysterectomy, the diagnosis of a pregnancy is often not expected and is made after several biochemical tests, imaging techniques, at surgery or even at histopathological examination.

Surgery is the most common intervention amongst the case reports.²⁻⁹ The various approaches include one or more of the following: salpingectomy, adnexectomy and trachelectomy (in cases

of previous subtotal hysterectomy).

In sealing off the fistulous tract cauterisation and the use of an omental patch has been described in some case reports.^{4,5}

McCool reported successful management of a post hysterectomy ectopic pregnancy with single dose methotrexate.⁹ The pregnancy was diagnosed early and the patient was clinically stable and a candidate for conservative management.

Morbidity and mortality is high due to delayed diagnosis. A systematic review in 2017 (57 cases at the time) found that 51% of patients had considerable blood loss, with 30% requiring blood transfusion.³

In this review there was one case of maternal death of a patient who required repeat blood transfusions and subsequently demised from sepsis.

To prevent pregnancy after hysterectomy, it is recommended that elective hysterectomy be performed in the pre-ovulatory phase of the menstrual cycle. Contraception before hysterectomy is also recommended.

Opportunistic salpingectomy at the time of hysterectomy is currently recommended to reduce the risk of ovarian cancer.¹² This possibly has an added benefit of reducing the risk of pregnancy after hysterectomy. More data is needed to confirm this.

Conclusion

Ectopic pregnancy after hysterectomy is rare but carries a high morbidity and mortality risk.

To prevent this, elective hysterectomy must be considered in the pre-ovulatory phase of the menstrual cycle and with effective contraception onboard. Clinicians must have a high index of suspicion for this condition in patients who present with pain after hysterectomy.

Authors Declaration:

We declare that this material is original and has not been previously published and has not been currently submitted elsewhere for publication.

Conflict of interest

We declare that there is no conflict of interest.

Consent for publication

A written consent for the publication of this article and clinical images was obtained from the patient.

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