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A RARE CASE OF PYOTRACHELOS: COLLECTION OF PUS IN A CERVICAL STUMP

Gynaecology

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ABSTRACT

Pyotrachelos is the collection of pus in the cervical canal. This is similar to pyometra. The causes of pyotrachelos and pyometra are the same. However, pyotrachelos caused due to stump malignancy should be differentiated from other etiologies, to avoid unnecessary invasive therapy. Very few cases of pyometra and almost no cases of pyotrachelos have been published. Our case is of a 55 year old surgically induced postmenopausal woman reporting to us with chronic foul smelling vaginal discharge and imaging showing a collection in the cervical stump which turned out to be of a non-malignant cause.

KEYWORDS

Pyometra, Cervical Stump Carcinoma, Pyotrachelos, Subtotal Hysterectomy, Stump Pyometra

INTRODUCTION

Pyometra is a condition wherein pus collects in the endometrial cavity. It is an uncommon condition occurring mainly in elderly postmenopausal females, and results when natural drainage of the uterine cavity is compromised. The common causes of pyometra include malignant condition of the genital tract and sequelae of their treatment, benign conditions such as infection and congenital cervical anomalies[1,2] This condition is commonly seen within the veterinary community especially in dogs and cattle,[3]but it is exceptionally rare in humans. *Streptococcus* species, *Bacteroides fragilis* and *Escherichia coli* are the most common organisms causing pyometra.[4,5]

In the above description, the collection of pus is seen in the endometrial cavity due to a certain obstruction in its outflow through the cervical os. The pus thus collects within the uterus. However, there have been very few cases reported of pus being collected within the cervical stump of a patient who has already undergone hysterectomy. We hereby, report this extremely rare case of cervical stump pyometra; or shall we call it pyotrachelos?

CASE REPORT

A 55 year old multiparous lady (Para 2, Live 2), undergone peripartum subtotal hysterectomy, for postpartum hemorrhage, following her second Caesarian delivery, 38 years ago, came to the outpatient department with complaints of profuse foul smelling discharge per vagina since one and a half months, in addition to being a diabetic and hypertensive, on treatment.

On examination, she was vitally stable, per abdominal examination revealed a subumbilical vertical midline scar. Per speculum examination showed a cervix that was high up and flushed with the vagina, with copious pus discharge from the cervical os. Vaginal walls were atrophic. On per vaginal examination, there was a vague, non tender mass of approximately 4-5 cm felt in the pelvis, non tender. Per rectal examination confirmed the findings of the bimanual examination. The rectal mucosa was was free.

The patient was admitted, and all her routine blood investigations revealed no abnormality. Patient came with CT scan abdomen report which showed moderate fluid in endocervical canal: ? Pyometra, due to cervical stenosis , secondary to subtle endocervical lesion.

We further subjected the patient to an MRI which showed a large cervical stump of approximately 4.4 cm. A 3.5 x 2.3 x 4 cm peripherally enhancing collection in endocervical canal likely Infective etiology (?Pyometra) with no focal lesion in distal endocervix. (Figure 1)

The patient was then given a course of antibiotics and subjected for an examination under anesthesia with dilation of the external os followed by an endocervical biopsy. The findings of bimanual examination were confirmed by the examination under anesthesia and about 30ml of foul smelling purulent discharge was drained (Figure 2).

Figure 1: MRI showing a large cervical stump of approximately 4.4 cm. A 3.5 x 2.3 x 4 cm peripherally enhancing collection in endocervical likely Infective etiology (?Pyometra) with no focal lesion in distal endocervix.

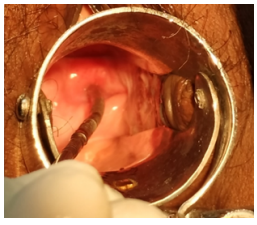

Figure 2: A pulled up cervix, flushed with the vagina is being serially dilated

Post operatively,she was continued on her antibiotic course and then discharged. The histopathological examination of the endocervical tissue showed no evidence of malignancy.

She was called for a follow up after 6 weeks and examination revealed a fibrosed external os. Hegar's dilator No. 4 was passed and 3ml of opaque fluid was drained. A repeat MRI showed a cervical stump with minimal fluid in the endocervical canal. (Figure 3)

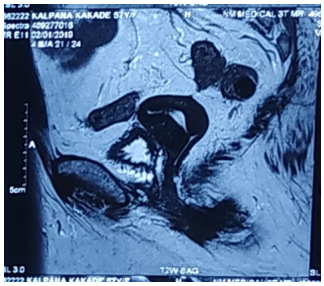

Figure 3: Follow up MRI shows a cervical stump with minimal fluid in the endocervical canal.

DISCUSSION

Pyometra is the collection of pus in the endometrial cavity. Going by this nomenclature, pyotrachelos would mean collection of pus in the cervical canal. This can also be called stump pyometra. The causes of this are many (discussed below). In our case report, it was due to several factors including a substandard subtotal hysterectomy for post partum hemorrhage. Postpartum hemorrhage (PPH) causes 25% of maternal deaths worldwide.[6, 7]The last measure for treating this

condition is an emergency extirpation of the uterus. This procedure is termed as obstetric or peripartum hysterectomy. The incidence of peripartum hysterectomy is reported to vary from 0.24 to 8.9 per 1000 9 deliveries, as per a systematic review by Machado LSM et al.[8]

There are two types of hysterectomy that can be performed during this obstetric emergency, namely, Total Abdominal Hysterectomy and subtotal Abdominal hysterectomy. Subtotal Hysterectomy is a type of hysterectomy where the cervix is left in-situ, while removing the rest of the uterus.

Subtotal hysterectomy is a safer and technically easier operation than total hysterectomy. It is said to be associated with a lower incidence of ureteric damage and vesico-urethral dysfunction. Also, the utero-sacral and cardinal ligaments remain intact, thus preserving the pelvic floor support. The cervix appears to play an important role in the arousal phase of intercourse and quality of orgasm in some women.[9] Additional benefits of the subtotal hysterectomy include less peri-operative blood loss and less post-operative infection and haematoma.

The problems with subtotal hysterectomy and leaving behind a cervical stump are mainly Vaginal bleeding [10] Pelvic pain and Dyspareunia.[11] Studies show that Cervical stump specimens have contained histological evidence of endometriosis, leiomyoma, and CIN/HPV infection. Mucocoeles of the cervical stump have also been reported. The incidence of cervical stump carcinoma within 10 years after subtotal hysterectomy has been estimated to be between 0.5% and 1.0%.[12]

There are however very few studies in humans reported wherein there has been collection of pus within the residual endocervical canal of the cervical stump and the reasons are not exactly known. However, we could speculate that the collection of pus could be due to repeated flares of cervicitis, as a result of an ascending lower genital tract infection, followed by fibrosis and stenosis of the cervical os. Infection of a mucocoele may lead to pyotrachelos, Since there have been reports of endometriotic deposits in the cervical stump, endometritis could cause a collection of pus within it.Obstructive causes like stump malignancies can also cause this condition. Iatrogenic causes like a Leforte's colpocleisis can result in obstruction and thereby pyometra.[13] The treatment of this condition usually involves the use of antibiotics, tubercular pyotrachelos necessitates the use of antitubercular therapy. Many women can be managed with cervical dilation and drainage of the collection, with regular monitoring to detect recurrent or persistent disease.14 Increasingly, interventional radiology guided drainage of pus may offer an alternative to surgery. 15 Trachelectomy either performed laparoscopically or vaginal approach is a form of permanent therapy, done in recurrent and non responding cases.

CONCLUSION

The cause of this rare case is a dilemma amongst most gynaecologists and could have resulted due to a poorly performed obstetric subtotal hysterectomy followed by cervical stenosis leading to the development of a chronic pyotrachelos. The initial imaging raised a doubt of cervical stump malignancy. However, this was ruled out by an endocervical biopsy, thus avoiding invasive treatment. The timely diagnosis of this condition was made by clinical examination, histopathological examination, though misled by the initial CT scan. This patient was initially given a course of antibiotics followed by a serial dilation of the stenosed cervical os and a endometrial biopsy was taken. On follow up we again drained a minimal amount of fluid and repeat imaging showed no abnormality. In summary, we report an exceptionally rare case of a pyotrachelos in a human, however such cases have been reported in animals.

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