IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 19, Issue 10 Ser.3 (October. 2020), PP 28-31
www.iosrjournals.org

Pyometra and its varied presentation: a Case Series

Dr.Sundri.R[1], Prof Dr.Onimi Syamala[2],Prof Dr.Usha Rani[3],Dr.Sathya Jagdish[4]
[1](Post Graduate,Department of Obstetrics and Gynecology, Sri Ramachandra Institute of Higher Education and Research/ Sri Ramachandra University,India)
[2](Professor,Department of Obstetrics and Gynecology, Sri Ramachandra Institute of Higher Education and Research/ Sri Ramachandra University,India)
[3](Professor,Department of Obstetrics and Gynecology, Sri Ramachandra Institute of Higher Education and Research/ Sri Ramachandra University,India)
[4] (Assistant Professor,Department of Obstetrics and Gynecology, Sri Ramachandra Institute of Higher Education and Research/ Sri Ramachandra University,India)

Abstract:
Pyometra is the accumulation of pus in the uterine cavity due to its defective natural drainage. It is extremely rare, but comparatively more common in elderly postmenopausal women occuring as a complication mainly due to underlying gynecological malignancy or cervical stenosis following radiotherapy despite other causes. It can chiefly present as post menopausal bleeding, vaginal discharge, lower abdominal pain, uterine enlargement and other non specific symptoms. We have discussed about this complication and its diverse presentation by way of five case reports, all of them having an underlying uterine/cervical malignancy. Ultrasound (USG) is the first line imaging technique adopted followed by MRI pelvis which helped in clenching the diagnosis. Treatment given was cervical dilation and USG guided pyometra drainage along with endometrial/endocervical curettage in all cases except one that was conservatively managed.

Key Words*: Pus, stenosis,malignancy, cervical dilation,drainage*

Date of Submission: 24-09-2020 Date of Acceptance: 07-10-2020

I. Introduction

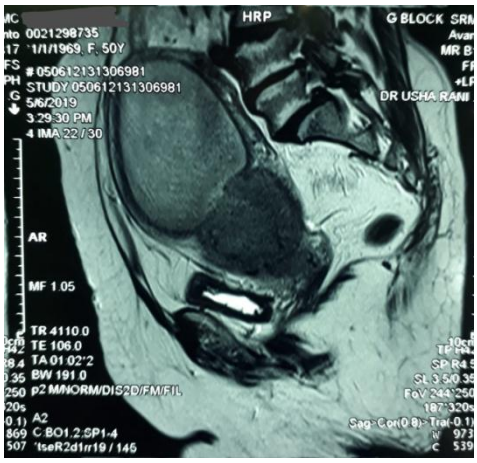
Post menopausal women can experience multitude of symptoms that is most often neglected by them. These can be due to several underlying pathologies including malignancy. Hence careful consideration of such symptoms and appropriate evaluation is required. Pyometra is one such complication with increasing incidence of 13.6% in elderly patients[1].It is the accumulation of pus in the uterine cavity as a result of defective natural drainage. Here, we have discussed in five case reports about this serious life threatening problem due to an underlying gynecological malignancy that has presented in various ways.

II. Case Description

Case Report 1:

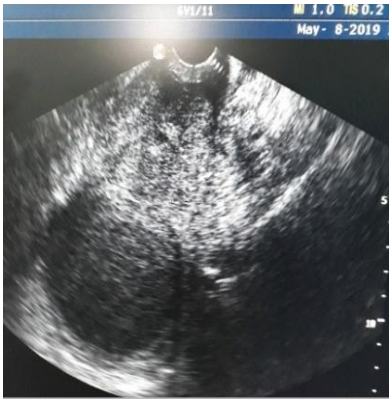
Mrs.K,51 years, P4L2D2/allNVDs(Normal Vaginal delivery)/sterilization done/post menopausal for 5 years/K/C/O(Known case of) Hypertension presented with complaints of one episode of post menopausal bleeding. H/O (History of) excessive white discharge per vaginum(P/V) 2weeks back. No other significant clinical history. Upon examination, patient's vitals and general condition were normal. Abdominal examination showed uterus 16 weeks size, Per speculum examination (P/S): Cervix and vagina healthy, Per vaginal examination(P/V): Cervix ballooned out with bilateral forniceal fullness. PAP smear taken was found to be negative for intraepithelial lesion or malignancy. Transvaginal sonogram(TVS) of pelvis showed bulky uterus with endometrial thickness-7.2 mm; a partly exophytic fundal fibroid of size 7.8x 6.2x 6cm was present with altered endo myometrial pattern. Endometrial aspiration attempted revealed no endometrial tissue but endocervical tissue consistent with features of CIN III (Cervical Intraepithelial Neoplasia) and underlying SCC(Squamous cell carcinoma) could not be ruled out. Hence ,MRI(Magnetic Resonance Imaging)Pelvis was taken in view of suspicion for malignancy,same showed bulky uterus with collection in endometrial cavity measuring 5.8x 9.8x 7.7 cm with volume of 218 cc causing myometrial thinning representing hematometra/pyometra and bulky cervix with symmetrical circumferential growth causing endocervical narrowing with focal areas of parametrium extension posteriorly.

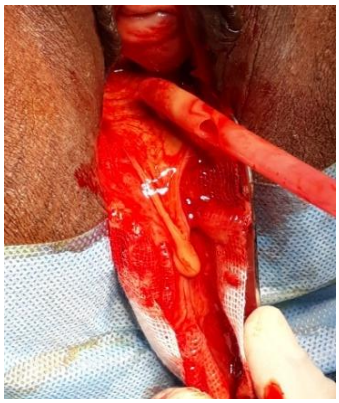
MRI IMAGE SHOWING PYOMETRA

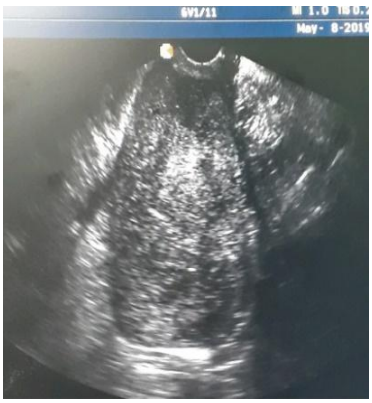


Patient then underwent pyometra drainage under ultrasound guidance: about 400-500ml frank pus was drained and sent for cytology and culture. Endometrial and endocervical curettage done and tissue sent for HPE (histopathological examination). Post procedural recovery was good. Pus culture showed no growth.HPE showed moderately differentiated SCC of cervix. Patient subsquently underwent chemoradiation.

IMAGES SHOWING USG GUIDED PYOMETRA DRAINAGE







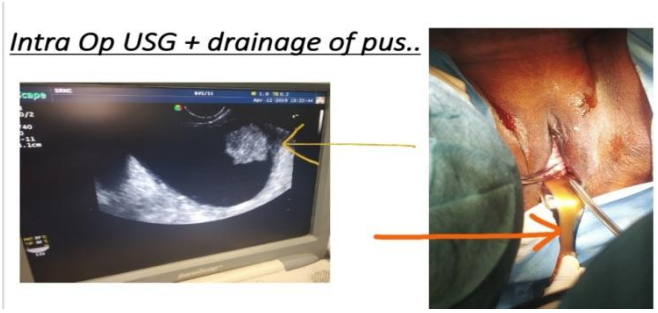
Case Report 2:

Mrs.S/68years/previous 2 NVD /sterilisation done/LCB(Last child birth)-34 years back/Newly diagnosed Type 2 DM(Diabetes mellitus)/post menopausal for 15 years presented with heaviness over the lower abdomen for 15 days. H/O increased frequency of micturition for 1 month and constipation on and off for 6 months. Upon examination vitals and general examination were normal. P/A:Uterus 20 weeks size .P/S:Cervix could not be visualised. P/V:a hard ,smooth rounded mass felt over the anterior wall of vagina.TVS pelvis showed uterine size of about 25.8x 10.8 cm with endometrial cavity distended with fluid suggestive of ?pyometra/hematometra. Ovaries could not be imaged. Patient then underwent MRI pelvis that showed gross enlargement of uterus,Endometrial thickness-3.2mm with massive hematometra of volume around 460cc along with bilateral HUN(Hydroureteronephrosis)(R>L) and no obvious cervical or vaginal lesion noted .Baseline investigations showed Hemoglobin-13.4g%,HbA1C of 9.2 ,RFT,LFT and serum electrolytes were normal.CA -125:49.5. In view of good hemoglobin status with uncontrolled DM, hematometra excluded and possibility of pyometra thought. After obtaining anesthetist fitness, Patient underwent USG guided pyometra drainage with endometrial curettage. Intra operatively, uterus was enlarged upto 24 weeks size. Vaginoscopy done but cervix could not be visualized. A small niche made over the bulging point of anterior vaginal wall swelling under USG guidance that drained 1.2 litres of pus, same sent for cytology and culture. Gentle endometrial curetting done, minimal curetting obtained and was sent for TB PCR, cytology and HPE. Bladder catheterized for 24 hours. Patient withstood the procedure well. Pus culture showed coagulase negative *Staphylococcus aureus* that was

treated with cefotaxime.HPE showed atypical epithelial cells with progesterone effect. Patient subsequently underwent hysterectomy.

Case Report 3:

Mrs.X,67 years/P4L4/Previous NVDs/Post menopausal for 27 years/sterilization not done/no comorbidities/with increased frequency of micturition(12-15 times) and dysuria for the past 1 month came with inability to void urine for 1 day(Acute retention of urine). No other significant history noted. Upon examination, vitals and general physical examination were normal. P/A: Uterus 12-14 weeks size;P/S:Cervix and vagina healthy with cervix pointing upwards; P/V: Uterus retroverted ,12-14 weeks size and cervix felt ballooned out. Baseline investigations showed Hemoglobin-13.1g%,RFT,LFT and serum electrolytes within normal limits. In view of acute retention of urine ,USG abdomen done showed cystic lesion in the pelvis with irregular walls measuring 8.4x7.6x7.6 cm with 255cc volume and mural nodule with increased peripheral vascularity. Considering the age, in order to diagnose the exact etiology, patient underwent MRI abdomen and pelvis that revealed pyo/hydrometra with thinned out myometrium along with irregular endometrial polypoidal growths suggestive of focal myometrial invasion consistent with neoplastic etiology. Patient underwent emergency cervical dilation to relieve the acute retention and pain. Serial dilation of cervical os done and pus of about 150 ml drained which was sent for cytology and culture. Gentle endometrial curetting done and tissue sent for HPE. Foley's catheterization done and left for 24 hours. IV(Intravenous) antibiotics given for 3 days .Post operative period uneventful. Cytology was negative for malignant cells and pus culture showed no growth. HPE showed features of atypical hyperplasia with fragments of tissue showing tumor cells arranged in papillary pattern. Patient subsequently underwent staging laparotomy for CA endometrium followed by radiotherapy.



Case Report 4:

Mrs.D,64 years /P3L3/3NVDs/LCB-36 years back/ Post menopausal for 14 years/Known case of T2DM on OHA presented with lower abdominal pain for 1 week. H/O white discharge p/v for 2 months. On examination, vitals stable, General physical examination -normal. P/A: uterus 16 weeks size. P/S: Cervical erosion noted over anterior lip . P/V: cervix ballooned out, uterus 16 weeks size. PAP-Negative. TVS pelvis showed features of pyometra that was confirmed by MRI pelvis along with bulky growth over the cervix suggestive of neoplastic etiology. Patient underwent ultrasound guided pyometra drainage with endometrial and endocervical curettage that was sent for HPE. Around 200 ml of yellowish discharge drained. Pus culture showed *Streptococcus* species and same was treated with cefotaxime and metronidazole. HPE showed moderately differentiated SCC of cervix that was later managed by chemoradiation.

Case Report 5:

Mrs.V ,80 years/P2L2/NVD/LCB-44 years/not sterilized/post menopausal for 30 years presented with white discharge P/V for 2 months. No other significant history. Upon examination, patient was stable. P/A: soft, P/S: cervix atrophic and appeared normal.PAP smear-HSIL(High grade Squamous Intraepithelial lesion).TVS pelvis done showed features suggestive of pyometra with volume of 112cc.No obvious uterine or cervical pathology noted. Findings were confirmed by MRI pelvis. Patient was given high risk for intraoperative complications by Anesthetist in view of her age for pyometra drainage and cervical biopsy; Patient was hence treated with broad spectrum antibiotics ceftriaxone and metronidazole. Patient symptomatically improved and hence was discharged.

III. Discussion

Pyometra ,an uncommon condition is the accumulation of pus in the uterine cavity due to the interference in the natural drainage of the uterus. Its reported incidence is 0.01-0.5% of gynecological patients occuring more commonly in elderly post menopausal women[2]. Principal cause for interference in drainage is due to stenosed cervical os mainly from underlying uterine or cervical malignancy or treatment with

radiotherapy. However several causes such as degenerated fibroid, endometrial polyps, cervical occlusion following procedure such as endometrial ablation, puerperal infections, forgotten IUCD, compression sutures following PPH(Post partum hemorrhage), congenital cervical anomalies can play a role. Here we have discussed about the principal cause i.e gynecological malignancy in post menopausal women. A myriad of presenting symptoms have been described such as post menopausal bleeding, lower abdominal pain ,vaginal discharge, mass abdomen, acute retention of urine, constipation. The diverse presenting nature ranging from specific symptoms to non specific ones posed a challenge in diagnosis. Lien *et al* discussed about seven cases out of which four were misdiagnosed as urinary tract infection[3]. Differential diagnoses for pyometra include uterine pathology such as fibroids, adenomyosis, hematometra, Gestational trophoblastic neoplasia along with vaginal pathologies such as vaginosis, vulvar vestibulitis and genital infections. Imaging modality adopted was USG as first line but a misleading diagnosis of fibroid was made as in the case of first case report which led to attempting endometrial aspiration. Due to the symmetrical growth in cervix, Probet could not be passed further that led to obtaining only endocervical tissue. Hence, owing to the serious nature of pyometra and its dangerous complication of perforation, MRI abdomen and pelvis was proceeded with to clench the exact diagnosis. Subsequent management by way of cervical dilation and pyometra drainage under USG guidance was carried out along with endometrial/endocervical curettage to know the exact etiology except for one that was conservatively managed due to the high risk involved from procedure. Broad spectrum antibiotics were prescribed in both the cases to treat the infection. Histopathological examination revealed the underlying gynecological malignancy that was subsequently managed as per protocol. Good prognosis chiefly depends on managing the underlying cause along with prevention of spontaneous perforation of pyometra

IV. Conclusion

Gynaecological malignancy can present by ways of serious manifestation such as pyometra with varied symptoms in post menopausal women. Good clinical judgement, prompt diagnosis and appropriate management prevents life threatening complications such as perforation and helps improve survival.

Abbreviations

NVD-Normal vaginal delivery
K/C/O-Known case of
H/O-History of
P/A-Per Abdomen
P/S-Per speculum
P/V-Per vaginum
PAP-Papanicolaou stain
CIN -Cervical Intrapithelial Neoplasia
HUN-Hydroureteronephrosis
SCC-Squamous cell carcinoma
HSIL-High grade squamous Intraepithelial lesion
DM-Diabetes Mellitus
HPE-Histopathological examination
TVS-Transvaginal sonography
USG-Ultrasonography
MRI-Magnetic Resonance Imaging
PPH-Postpartum Hemorrhage
IUCD-Intrauterine Contraceptive Device

References

[1]. Pramila Yadav*, Nikhil Datar, Pabashi Poddar, Komal Chavan, Rajendra Saraogi."Huge pyometra in a postmenopausal age: a diagnostic dilemma"International Journal of Reproduction,Contraception,Obstetrics and Gynecology.2015 Oct;4(5):1549-1551
[2]. Pyometra,authored by Dr Colin Tidy, Reviewed by Prof Cathy Jackson | Last edited 27 Jul 2016 | Certified by The Information Standard
[3]. Lien W C *et al."* Pyometra :a potentially lethal differential diagnosis in older women".*The American Journal of Emergency Medicine* 28.1(2010):103-105

Dr.Sundri.R, et. al. "Pyometra and its varied presentation: a Case Series." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 19(10), 2020, pp. 28-31.