

## Case Report

# Postmenopausal Bleeding as a Late Sequela of Pelvic Fracture

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ABSTRACT

Postmenopausal bleeding is one of the common presenting complaints in the gynecological outpatient department. The common causes of which are atrophic endometritis, vaginitis, estrogen therapy, cancer endometrium, and cancer cervix. Hereby, we present a rare case of a 65-year-old female presented with postmenopausal bleeding who had history of trauma 1 year back with pelvic bone fracture. The cause of postmenopausal bleeding, in this case, is abnormal bony protrusion secondary to malunited pelvic fracture causing laceration of the right lateral vaginal wall. The case was managed by local osteotomy and vaginal wall repair.

**KEYWORDS:** *Pelvic fracture, postmenopausal bleeding, vaginal laceration*

## INTRODUCTION

Postmenopausal bleeding is one of the common gynecological complaints in the elderly age group which accounts for about 5%–10% of the visits to the gynecology outpatient department (OPD).<sup>[1]</sup> Atrophic endometritis and vaginitis are the underlying pathologies in the majority of cases of postmenopausal bleeding, others being exogenous estrogen therapy, chronic cervicitis, endometrial and cervical polyp, endometrial cancer, cervical cancer, fibromyoma, and sclerosis of uterine vessels.<sup>[1,2]</sup> Here, we report the case of postmenopausal bleeding secondary to long-term sequela of pelvic fracture. Pelvic ring fractures can range in severity from undisplaced fractures without loss of pelvic stability to unstable fractures leading to considerable morbidity and even mortality.<sup>[3]</sup> Genitourinary injuries are sequelae in 30% of pelvic fractures, among which bladder and urethral injury are most prevalent.<sup>[4]</sup> Vaginal injuries are reported only in a small percentage of genitourinary injuries. The usual long-term sequelae of which is dyspareunia.<sup>[5]</sup> Secondary vaginal bleed as a long-term consequence is uncommon.

## CASE REPORT

A 65-year-old female was consulted in the telemedicine OPD during the lockdown period of the COVID-19 pandemic for complaints of bleeding per vaginum from the last 2 months soaking two–three pads per day which

had decreased to very mild bleeding over months. There is no history of recent genital trauma, intercourse, any vulvovaginal, or abdominal lump. The patient had menopause 10 years back, and her previous menstrual cycles were regular with the average flow. She was a known diabetic controlled on oral hypoglycemics. She gave no family history of gynecological or breast malignancy. The patient had a history of pelvic fracture due to fall from a motorcycle a year back with difficulty in walking for nearly 2 months.

The patient was advised to get a complete blood count and an ultrasound pelvis from a nearby laboratory, and reports were reviewed electronically to rule out genital malignancy as the most sinister and common underlying pathology of postmenopausal bleeding. Her hemoglobin level was 8.2 g % and ultrasound suggested a senile size uterus with an endometrial thickness of 3.2 mm. Bilateral adnexa was normal. The patient was prescribed tranexamic acid for 5 days and was instructed to report in the next OPD day.

On examination of the patient, her vitals were stable. Her abdomen showed no organomegaly. On local per speculum examination, a bony projection obstructing

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vaginal canal was seen protruding through the right lower vaginal wall with overlying torn vaginal mucosa about 3–4 cm in length with bleeding from laceration. The cervix could not be visualized, and detailed per vaginum examination was not possible due to that bony projection.

In view of the history of pelvic fracture and bony protrusion on local examination, pelvic computed tomography (CT) scan was planned. The CT was suggestive of old fractures of bilateral iliac bones and right ischiopubic rami [Figure 1]. On the right side, the oblique malunited fracture of the right iliac bone resulted in the inferomedial displacement of the entire right pelvic bone and right ischiopubic rami indenting into the vaginal wall. In joint consultation with the orthopedic department, the plan for examination under anesthesia along with the removal of protruding bone and possible laceration repair was made.



**Figure 1:** Computed tomography scan of pelvis in soft tissue window axial (a), bone window axial (b), and coronal (c) images showing malpositioned and medially projected right ischiopubic rami (black arrow) compressing adjacent right wall of the vagina (dashed arrow). (d) The volume-rendered 3D image of the pelvis shows an old malunited right pelvic bone fracture resulting in the medial displacement of ischiopubic rami (white arrow)

Examination under anesthesia revealed a bony fragment measuring about 3 cm protruding in the right lateral vaginal wall [Figure 2]. Osteotomy of the protruding fragment was done till it was clear of the vaginal wall. Overlying vaginal laceration of about 4 cm on the right lateral vaginal wall was repaired using continuous suture with vicryl number 1-0 [Figure 2]. Bony fragments were sent for culture/sensitivity which came out positive for *Pseudomonas aeruginosa*. The woman was discharged on a postoperative day 9 after intravenous antibiotics for 7 days. Further orthopedic management of pelvic fracture malunion was planned as a staged procedure once the vaginal wound had healed.

On follow-up of 3 weeks postsurgery, a healthy vagina and cervix with no bony protrusion were noted on per speculum examination. In this case, the long interval between the pelvic trauma and the onset of vaginal bleeding swayed the diagnosis and the course toward the standard workup of postmenopausal bleeding.

## DISCUSSION

Out of various causes of postmenopausal bleeding, the cause of postmenopausal bleed in our case was vaginal injury. Usually, vaginal trauma is observed secondary to vigorous sexual intercourse, road traffic injury, snowboarding, water skiing, and blunt trauma.<sup>[6]</sup> In our case, the trauma was caused due to impingement of bony fragment due to malunion of pelvic girdle fracture. This displaced bone led to vaginal mucosal hemorrhage which continued to bleed for around 2 months which presented as postmenopausal bleeding. Our case highlights the role of physical examination in a patient with postmenopausal bleeding at the initial onset. After a thorough search of published literature, we deem that this case is the first reported case of pelvic fracture presenting as postmenopausal bleeding as a delayed sequela.



**Figure 2:** (a) Intraoperative images of vagina showing right ischiopubic rami indenting into the vaginal cavity (star) with overlying vaginal wall laceration (arrow). (b) Bony fragments extracted during osteotomy. (c) Right lateral vaginal wall after repair (arrow)

Pelvic fractures are usually caused due to high-intensity forces such as motor vehicle accidents, fall from height, or vehicle.<sup>[3]</sup> The conservative approach to pelvic fractures is well established but prone to complications of nonunion and malunion. The identified reasons for pelvic nonunion/malunion and its complications are the severity of the initial trauma, type of fracture, lack of adequate initial stabilization of the pelvic ring, major displacement, and the nonoperative approach.<sup>[7]</sup> The risk of vaginal injury is rare and is seen in compromised pubic symphysis, vertical shear fracture, anterior ring disruption, and forces causing pelvic ring instability.<sup>[8]</sup> Aggarwal *et al.*, had similarly reported a case of bony impingement causing urethrovaginal fistula as a late complication of pelvic fracture.<sup>[9]</sup> Fowler *et al.*, have also described vagina stenosis in a case of pediatric pelvic fracture 15 years following injury.<sup>[3]</sup>

## CONCLUSION

To conclude, this case presents a rare long-term complication of pelvic fracture presenting as vaginal bleeding secondary to the malunion. Thus, before starting any treatment, a presenting complaint should be carefully evaluated. In an era, full of diagnostic modalities role of clinical examination cannot be surpassed in making any diagnosis.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient (s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names

and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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## Conflicts of interest

There are no conflicts of interest.

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