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PROCIDENTIA UTERI AND RECTOCELE CONCOMITANT WITH ANEMIA OF HEMORRHOIDS GRADE IV: A CASE REPORT

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ABSTRACT

Background: Pelvic organ prolapse in older women remains a major reproductive health issue in gynecology. Decreased pelvic floor compartment strength, which can affect multiple structures, presents new challenges beyond the scope of gynecology. Understanding the pathophysiological cascade from one compartment to another is essential to help determine appropriate initial therapy for individuals suffering from pelvic organ prolapse. **Case presentation:** In this case report, a patient with severe uterine prolapse for one month developed rectal prolapse and severe hemorrhoids, leading to anemia. Definitive management should be postponed to allow initial management to improve the patient's general condition. **Conclusion:** Asymptomatic pelvic organ prolapse should not be ignored, as it can lead to the development of other diseases and reduce the individual's quality of life. Chronic increased intra-abdominal pressure can lead to pelvic organ prolapse in more than one compartment and ultimately impair venous return. Pessary ring placement is the first option if the prolapsed mass can fully retract into the vaginal introitus. However, regular monitoring is mandatory to avoid complications after pessary ring installation.

INTRODUCTION

Pelvic Organ Prolapse (POP) is a descent of pelvic organs from their normal anatomical position, which is more prevalent in elderly or postmenopausal women. Anatomically, the pelvic organs are supported by ligaments and muscles that form the pelvic floor. Aging or trauma can cause the pelvic organ support structures to lose their strength. Types of POP frequently encountered in clinical practice include cystocele, urethrocele, enterocele, uterine prolapse, rectocele, and vaginal prolapse[1,2].

Indonesia has an uncertain prevalence of pelvic organ prolapse. However, a 2025 study at a tertiary referral hospital in a major city found that the prevalence of POP could reach 26.4% of all gynecological cases. Furthermore, the risk of POP increases by 50% in women after childbirth[3].

There are four degrees of uterine prolapse, while fourth-degree uterine prolapse is defined as the protrusion of the complete uterine mass beyond the vaginal introitus, also known as procidentia. Procidentia uteri typically occurs in weakened pelvic support structures and is associated with multiparity, aging, and connective tissue disorders. Generally, the prolapsed mass is not painful, but it can interfere with comfort, defecation, and aesthetics. In sexually active women, uterine prolapse can interfere with sexual intercourse[4, 5].

Uterine prolapse can occur alone or in conjunction with other pelvic organs from different compartments, such as the prolapse of the rectal wall from the posterior compartment. Multicompartment pelvic organ prolapse that is left untreated for a long time will cause new problems, such as blockage of blood flow from the pelvic organs. This case report will discuss multicompartment POP among procidentia uteri (uterine prolapse), rectocele (rectum prolapse), and hemorrhoids, referred to as pelvic floor disorders[1,4].

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Coincidence of procidentia uteri with rectocele with hemorrhoid grade 4 is a rare case and sufficient to lower the quality of life through anemia manifestation[5,6]. Furthermore, this case will examine the association of procidentia uteri, rectocele, hemorrhoid grade 4, and anemia through a cascade of mechanical pelvic floor disorders and the initial management of this complex case.

CASE PRESENTATION

A 74-year-old woman presented to the emergency department with her family complaining of bloody stools and lumps on her genitals and anus for the past month. The lump was first found on her genitals, but she ignored it because it was painless and she was still able to urinate. Two weeks later, a painful lump appeared in the anus, followed by bloody stools. Other complaints included weakness and decreased appetite.

The patient had a history of four pregnancies, all of which had been delivered vaginally by a village midwife. Her third pregnancy presented with anemia due to heavy postpartum bleeding, requiring a blood transfusion. She denied any family history of other illnesses. She worked as a farmer and frequently carried dry wood or harvested produce.

A physical examination of her head and neck revealed anemic conjunctivae in the right and left eyes, accompanied by a pale face. A capillary refill time of more than 2 seconds was noted on her extremities. A vaginal examination revealed a pink, painless, protruding mass about the size of an adult male's arm. A rectal examination revealed a bright red, painful, ping-pong ball-sized protruding mass. A digital rectal examination was not performed because the patient complained of severe pain.

Laboratory blood tests revealed a hemoglobin level of 7.4 mg/dL. The diagnosis was confirmed as Procidentia Uteri + Grade 4 hemorrhoids with rectocele + anemia. Treatment consisted of 250 cc of intravenous fluids, tranexamic acid intravenously, and pyridoxine HCL drip intravenously. The patient was then referred to a specialist in internal medicine, obstetrics and gynecology, and general surgery.

The internist advised two blood transfusions; the obstetrician and gynecologist recommended inserting a pessary if the uterine mass was responsible; and the general surgeon recommended referral to a hospital with a digestive surgeon available to confirm the rectocele. The patient was referred once her condition was stable and her anemia had resolved.

(a)

(b)

Figure 1. (a) a mass protruding from the vaginal introitus in the form of complete uterine prolapse or procidentia and (b)Rectocele coincidence with hemorrhoids grade 4 and stain of blood loss from anorectal.

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Table 1. Clinical pathology laboratory results

Parameters	Result
Hemoglobin	7.4 g/dL
Leukosit	8.010 x10^3/mikroL
Trombosit	261.000 x10^3/mikroL
Eritrosit	4.12 x10^6/mikroL
Hematokrit	29.0%

DISCUSSION

Pelvic Organ Prolapse (POP) is a condition in which one or more pelvic organs (bladder, uterus, rectum) bulge into the vagina due to supportive structures like muscle or ligament deterioration through aging or trauma[7,8]. In clinical practice, POP may present with a marked vaginal bulge[9,10].

Higher risk factors for POP include multiparity, vaginal delivery, and advanced age, which are the most significant for developing pelvic floor dysfunction[11,12]. In this case, the history of four vaginal deliveries and an advanced age of 74 years old could substantially elevate the risk for pelvic floor disorders.

Another risk factor from the case is the occupational history as a farmer who frequently carried dry wood and harvested products. This chronic heavy-lifting job could act as a mechanical stressor, causing weakening of the pelvic floor as intra-abdominal pressure increases over time[11,12].

Based on anatomy, the pelvic floor is divided into anterior (bladder and urethra), middle (uterus and vagina), and posterior (rectum) compartments. These compartments are anatomically interconnected, and prolapse in one compartment could predispose to collapse in adjacent compartments. Advanced prolapse of the uterus, or procidentia, initiates mechanical effects that spread beyond compartments and is able to exert traction on the rectovaginal septum to form a rectocele[13].

Rectocele is defined as a herniation of the anterior rectal wall into the posterior vaginal wall[14]. A patient with rectocele could manifest constipation, excessive straining during bowel movements, and the experience of incomplete defecation. The association between rectocele and hemorrhoidal disease is mediated through chronic excessive straining during incomplete defecation[15].

The fundamental mechanism of procidentia uteri, rectocele, and hemorrhoids involves progressive deterioration over time of connective tissue that delivers structural support to pelvic organs[16]. This dysfunction of connective tissue affects the pelvic floor compartments simultaneously, starting in the middle and progressing to the posterior compartments.

Another mechanism that can lead to pelvic organ prolapse is weakened pelvic floor muscles. As evidence, treatment for defecation obstruction in older people consists of pelvic floor muscle training to facilitate defecation. Pelvic floor muscle training has shown that well-coordinated pelvic floor muscles act as effective aids for defecation[17]. Meanwhile, dysfunctional pelvic floor muscles can contribute to POP and initiate the formation of hemorrhoids.

Hemorrhoidal disease in pelvic organ prolapse includes complex hemodynamic disturbances of the venous plexus. Pelvic venous vascular disorders are triggered by increased venous return pressure due to obstruction of blood flow, commonly referred to as symptoms-varices-pathophysiology[18]. This obstruction can originate from a prolapsed uterine mass that blocks venous return from the hemorrhoidal plexus, causing venous bulging or congestion. Venous congestion, exacerbated by prolonged straining, worsens the progression of hemorrhoidal disease.

Chronic, prolonged straining increases pressure within the abdomen, which is then transmitted to the hemorrhoidal plexus, causing severe hemorrhoidal prolapse[19]. Swelling of the hemorrhoidal plexus up to grade IV can also disrupt the comfort and quality of life for older adults through anal discomfort, bleeding during defecation, and an increased risk of iron deficiency anemia[20]. In this case, the patient's clinical pathology laboratory examination revealed a hemoglobin level of 7.4 g/dL, consistent with anemia.

Management of anemia in all older adults, including those with pelvic organ prolapse, requires investigation of the cause of blood loss, along with initial management of the patient's general condition[20]. In this case, initial management included fluid resuscitation to replace fluid loss, a pyridoxine HCL drip to improve the patient's appetite, and tranexamic acid to stop acute blood loss. The internist then recommended an additional two packs of blood transfusion, with the hope of increasing the hemoglobin level by 2 g/dL to improve the patient's general condition. Initial management is important to stabilize the patient's condition before definitive treatment is performed based on the cause of the anemia.

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Another initial management in this case is the use of a pessary ring for uterine prolapse by a gynecologist if the prolapsed mass can be completely reinserted. The use of an intravaginal pessary ring is a non-surgical option in the management of POP. It is often the first choice of conservative management for patients whose condition is not conducive to surgical management[21]. Intravaginal pessary rings have been recognized as the first choice option for POP patients who refuse surgery[22,23,24]. This conservative management intends to restore the pelvic organs to their original anatomical position and to reduce gastrointestinal symptoms, such as constipation[25,26].

The same case report also supports the use of pessary rings as a successful conservative treatment for POP in the form of a second-degree cystocele, third-degree uterine prolapse, and second-degree rectocele[27]. This proves that pessary ring placement is effective in multicompartmental pelvic organ prolapse. Another case report is the successful use of pessary rings installed in a 72-year-old multiparous woman with multicompartmental pelvic organ prolapse, including uterine prolapse, third-degree cystocele, and third-degree rectocele complicated by bilateral uretero-pyelolocaliceal dilation[25].

Although pessary rings are recommended for the management of pelvic organ prolapse, especially in patients who refuse surgery or are delaying definitive surgery, routine monitoring is still necessary to prevent complications of pessary ring use, such as infection, irritation, and erosion of the vaginal wall[21,28].

CONCLUSION

Uterine prolapse comorbid with rectocele and grade 4 hemorrhoids that trigger anemia is an example of a complex case of pelvic organ prolapse that is not treated properly, triggering anatomical cascade dysfunction of the pelvic floor, thus disrupting quality of life. The patient's history of four vaginal deliveries, advanced age, and daily heavy lifting are high-risk factors for weakening the pelvic floor support structures. The interconnection of multiple pelvic floor compartments in the form of severe uterine prolapse and subsequent rectocele formation also increases chronic abdominal cavity pressure, causing hemorrhoidal venous plexus congestion with symptoms of bleeding and anemia. An interdisciplinary approach in conservative management to maintain patient stability, such as intravenous fluid administration, blood transfusion, and pessary ring placement, also illustrates the importance of integrated care before definitive surgical therapy.

ETHICAL APPROVAL

There is no ethical approval.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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AUTHOR CONTRIBUTIONS

Conceptualization, G.N.R.P. and M.G.A.N.; methodology, M.G.A.N.; validation, M.G.A.N., K.S.S., and A.N.F.; formal analysis, G.N.R.P. and M.G.A.N.; investigation, G.N.R.P.; resources, M.G.A.N., K.S.S., and A.N.F.; data curation, G.N.R.P.; writing—original draft preparation, G.N.R.P.; writing—review and editing, M.G.A.N., K.S.S., and A.N.F.; visualization, G.N.R.P. and M.G.A.N.; supervision, M.G.A.N., K.S.S., and A.N.F.; project administration, G.N.R.P.

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