

Management of multiple pelvic organ prolapse due to pulmonary tuberculosis in a suburban hospital: A case report

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ABSTRACT

Pelvic organ prolapse (POP) is a condition in which the pelvic organs herniate into the vaginal canal or the vaginal introitus due to weakness of the pelvic floor support structures. The occurrence of POP is prevalent, especially in older women, with various other risk factors, including multiparity, obesity, menopause, malignancy, and chronic infections. We report a unique and rare case in which uterine prolapse was followed by cystocele and rectocele with the risk factors of advanced age, menopause, and chronic cough in a 73-year-old female who complained of a chronic cough for 2 months. When coughing, the patient experienced a protrusion coming out, especially from the vaginal canal. Other complaints included night sweats, urinary problems, and constipation. Additional sounds identical to fine rhonchi were found on auscultation examination in both lung fields. On examination of the external genitalia, a pink protrusion came out of the vaginal introitus, approximately the size of a chicken egg, accompanied by the hyperemic rectal mucosa protrusion through the anal canal. Chest X-ray results confirmed that there was an active tuberculosis infection.

Key words: Pelvic organ prolapse, Transvaginal hysterectomy, Thiersch, Pulmonary tuberculosis


Pelvic organ prolapse (POP) is a condition in which a herniation of one or more pelvic organs (uterus, urinary bladder, and rectum) is found in the vaginal canal or the vaginal introitus [1]. POP is commonly brought about by weakness in the supporting structures of the pelvic floor, encompassing the interaction between bones, ligaments, and muscles. Due to the limited reports of POP incidents globally and nationally (Indonesia), the prevalence of POP remains unclear. Uncertainty regarding the number of POP cases depends on the type of research conducted, so it is variable, ranging from 3% to 50% [2]. In Indonesia, 33 POP cases were recorded at Dr. H. Abdul Moeloek Lampung from January 2014 to December 2018 [3]. The condition of POP is deemed alarming as it affects survival, especially daily activities such as difficulty standing and walking due to discomfort in the pelvic area, as well as problems with urinating, defecating, and dyspareunia. Even though POP is not a life-threatening issue, the mobility restrictions they entail have a significant impact. Apart from physical problems that can reduce the health of reproductive organs, social and psychological

changes have the potential to occur due to a decrease in the quality of sexual relations, hesitation to seek help, and treatment is costly; thus, in the long term, it can provoke various complications [4,5]. These impacts worsen the quality of life of sufferers.

CASE REPORT

A 73-year-old female visited the hospital with complaints of a protrusion coming out of the vaginal canal and rectum for 2 months, resulting in uncomfortable feeling when sitting and constipation when defecating. The protrusion disturbed her activities, but no pain was experienced. She also complained of a dry cough for the last 2 months. When doing so, she felt that the protrusion was coming out of the vaginal canal. She also complained of night sweats, yet there was no significant weight loss. Previously, she had received independent treatment, but no improvement had been shown. Another complaint is continuous urination, which was deemed unfinished. Her obstetric history was that she had only given birth vaginally once.

On physical examination, generalist status was found to be a relatively general condition, with blood pressure 180/100 mmHg

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and heart rate 89×/min. Both of the conjunctivae were anemic. In localized status, an examination of the external genitalia discovered a lump on the vaginal introitus, pink in color, approximately 10 × 8 × 3 cm. In the anal area, a prolapsed segment of rectal mucosa was observed 3 cm from the anal port with hyperemia (Fig. 1).

A complete blood laboratory examination revealed a decrease in hemoglobin levels (9.9 mg/dL). Meanwhile, on thoracic X-ray examination, bilateral fibroinfiltrates and calcifications were visible in the mediobasal area of the lungs; therefore, it was confirmed as tuberculosis (Fig. 2).

In the emergency unit, the patient received general corrective therapy. The therapy used to treat lung infections is ceftazidime, acetylcysteine, and nebulization every 8 h with ipratropium bromide monohydrate, salbutamol sulfate, and budesonide. In addition, manual repositioning of the prolapsed uterus and rectum was successfully performed. When the patient's condition was stable, the patient was planned for surgery. Based on various considerations of the patient's condition (older and comorbid), the planned action would be a transvaginal hysterectomy (TVH) with anterior and posterior colporrhaphy and the Thiersch procedure



Figure 1: Inspection. (a) On the external genitalia, a pink protrusion comes out of the vaginal introitus in the size of a chicken egg; (b) in the anal canal, a hyperemic rectal mucosa protrusion with the size of 3 cm × 3 cm × 1 cm

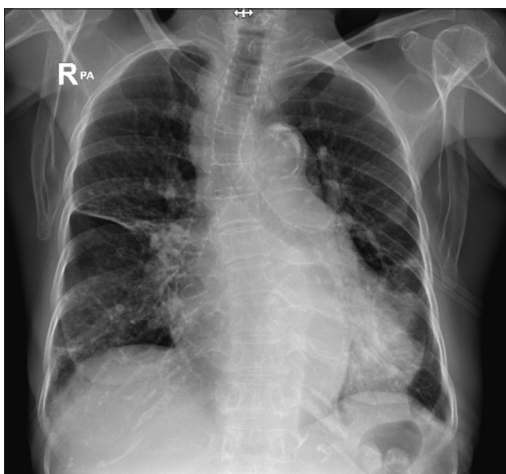


Figure 2: A thoracic photo displays the fibro infiltrates in both lung fields

to treat rectal prolapse. After surgery, tuberculosis treatment was continued, and laxatives were given. The patient was educated to practice sitz bath and always clean the perineal and anal areas. The patient was observed for 2 days after surgery and went home in stable condition.

DISCUSSION

Based on research at the gynecology polyclinic of Dr. Soetomo Surabaya during 2015–2017, 27 of 65 sufferers (41.5%) of uterine prolapse were diagnosed with a condition fourth-degree and aged 50 years and over [4]. Meanwhile, the results of the research by the Women's Health Initiative in the United States revealed that around 41% of POP incidents occurred at the age of 50–79 years [6]. This corresponds with this study, in which the patient was a 73-year-old female and was initially presented with a fourth degree of uterine prolapse, even accompanied by cystocele and rectocele. Advanced age and menopause are the two main risk factors in this case because women experiencing menopause commonly have a decrease in estrogen levels, causing pelvic floor muscle atrophy. Meanwhile, the degenerative process in older women is low collagen levels. Therefore, in the long term, it can damage the uterosacral ligament, cardinal ligament complex, and urogenital membrane connective tissue [6].

Before the protrusion collapsing into the vagina and rectum, the sufferer complained of persistent coughing and had repeatedly sought treatment at a primary-level health facility, alas insignificant. This may serve as an essential risk factor for POP, in which chronic coughing can increase intra-abdominal pressure to weaken the strength of POP [7,8]. Similar to a study in Eastern Ethiopia, sufferers who had a history of chronic cough were at 2.3 times the risk of developing POP [8]. A study in China also found that symptomatic POP occurred more prevalently among sufferers with chronic cough, namely more than 3 weeks [9]. Chronic cough conditions can be prompted by several lung diseases, including pulmonary tuberculosis. In this case, the patient was diagnosed with pulmonary tuberculosis based on clinical and chest X-rays. So far, in Indonesia, no cases of POP due to pulmonary tuberculosis have been reported.

Clinically, POP patients mostly complain of lower abdominal pain, a sensation of bulging in the vagina/rectum, urinary disorders such as urinary incontinence or an overactive bladder, and constipation [10]. Most of the protrusion of the vaginal/rectal area is obscure, so sufferers should be intervened by pushing or lifting heavy weights. However, among patients with prolapse of the uterus, vaginal discharge can also be a clinical manifestation due to friction in the vagina [9]. In this study, the patient is uncommon because she only experienced inconvenience when sitting; however, there were symptoms of urinary incontinence, constipation, and vaginal discharge. The patient admitted that she did not know for sure when the lump in the vaginal and rectal introitus first appeared. If the uterine prolapse was Grade 4, it should have been diagnosed as chronic.

In general, there are two options for POP interventions, namely non-operative and operative. A non-operative intervention can

be carried out by inserting a ring pessary, but this intervention is inappropriate for elderly patients [11]. Older women are more susceptible to infection due to poor hygiene. Meanwhile, the operative intervention, namely hysterectomy, should address various considerations, such as age and future sexual activity. A hysterectomy can be performed abdominally or vaginally. However, the vaginal approach is regarded as more advantageous since it is less invasive and offers the opportunity to correct other pelvic floor damage [11]. In this case, the patient experienced prolapse of several organs, encompassing uterine prolapse followed by cystocele and rectocele; hence, surgical therapy became the primary choice for reconstruction of both the anterior and posterior compartments. The surgical method performed on the patient was TVH with anterior and posterior colporrhaphy (Fig. 3).

Operative intervention for rectal prolapse can be conducted via intra-abdominal and perineal approaches. However, if the patient has specific comorbidities, a perineal approach is encouraged. The perineal approach can be carried out with one of these three procedures: Altemeier, Thiersch, and Delorme perineal rectosigmoidectomy [12,13]. According to the American Society of Colon and Rectal Surgeons, the Delorme procedure is endorsed for rectal prolapse with a length of <5 cm. In comparison, the altemeier perineal rectosigmoidectomy procedure can opt for

rectal prolapse with a length of >3 cm [12-14]. Meanwhile, the Thiersch procedure widely treats elderly patients and has a high risk of rectal prolapse [15]. Consistent with the patient, who is elderly and possesses comorbid heart disease and lung infections, it is more favorable to consider surgery through the Thiersch procedure (Fig. 4). The procedure began with repositioning and evacuation of feces. Afterward, an incision was made on the perineum and inferior anal area at 6 o'clock. The operator performed an anal rectopexy and removed excess tissue. In addition to controlling bleeding, the operator evaluated the anal diameter of approximately 1 cm and sutures the surgical wound.

CONCLUSION

Based on the history, physical, and supporting examination, the patient was diagnosed with multiple POPs, namely uterine prolapse, cystocele, and rectocele. The leading risk factor of the subject is advanced age, which implies that the prevalence of POP increases with age. There was intra-abdominal pressure, which occurred intensively due to the chronic cough experienced by the patient, namely tuberculosis. The condition of POP is not life-threatening but can have significant physical, social, and psychological impacts in the long term.

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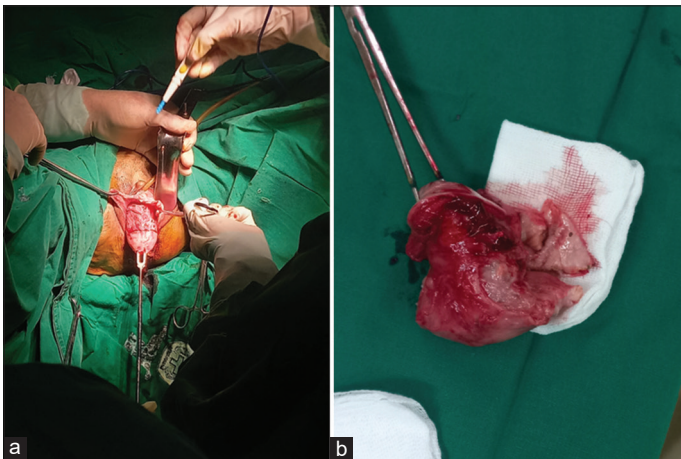


Figure 3: (a) Transvaginal hysterectomy procedure and (b) removed uterus



Figure 4: Post-operative of Thiersch procedure on rectal prolapse

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