



Case Series

Cervical elongation caused by big cervical fibroid resembling malignant cervical prolapse? Management via vaginal surgery



Fernandi Moegni, Surahman Hakim, Gita Nurul Hidayah*, Suskhan, Tyas Priyatini, Alfa Putri Meutia, Budi Iman Santoso

Urogynecology Division Department of Obstetrics and Gynecology, Faculty of Medicine University of Indonesia, Dr. Cipto Mangunkusumo Hospital, Jakarta, Indonesia

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ABSTRACT

INTRODUCTION: Cervical elongation could lead to cervical elongation thus worsen the descent of uterine prolapse. In certain cases, this hypertrophic and hyperplastic mass could have fragile surface with some bleeding and necrotic, resembling cervical cancer. As case of cervical elongation due to cervical fibroid is quite rare, such cases are valuable to be reported. We present two cases of cervical fibroid with cervical elongation resembling cervical malignancy.

PRESENTATION OF CASE: First case was A 59-year-old lady with intractable vaginal mass since one day before admission. Bleeding from the mass was positive. We found a bulky vaginal mass exceeding hymenal ring, 14 × 7 × 6 cm sized, with some necrotic and discharge, foul smelling, and some bleeding area. Ultrasound evaluation revealed a cervical fibroid with differential diagnosis cervical malignancy. The second case was Mrs 53-year-old with vaginal mass since last year. For the last 7 months the mass has been bigger and could not be inserted into vagina, with some bleeding. We found globular vaginal mass 12 × 9 × 6 cm exceeding hymenal ring, with some necrotic and reddish surface, foul smelling, discharge, and some blood. Ultrasound evaluation revealed cervical mass on anterior lip with elongated cervixes. Both cases have been menopausal. As the clinical presentation resembling malignancy, we did biopsy. The biopsy results were no evidence of malignancy, then we did Manchester fothergill, and colporaphy as needed.

DISCUSSION: Length between internal to external cervical ostium \geq 5 cm correlated to cervical elongation. Growing cervical mass could drag the cervix, predisposing to cervical elongation and prolapse. Cervical fibroids protruded through vagina was usually pedunculated. But in our cases, the fibroids were not pedunculated but manifested as a bulky mass on the cervical tissue with some bleeding and necrotics, mimicking cervical malignancy. The most important initial management besides ultrasound evaluation was mass biopsy.

CONCLUSION: In such cervical fibroids with cervical elongation resembling cervical malignancy, biopsy is compulsory to determine the diagnosis and to lead the management.

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1. Introduction

Uterine prolapse could be found together with cervical elongation. This could be due to the prolapsed uterus had longer cervixes or the descent of the developing prolapse induced cervical elongation through downward traction [1]. Growing cervical mass could drag the cervix, predisposing to cervical elongation and prolapse [2]. Cervical cancer is one of the most prevalence cancer in woman. Cervical cancer could be manifested as fragile cervical mass with

some bleeding and necrotic. Cervical fibroid commonly manifested as solid-bulky cervical mass with smooth surface. But in some case the fibroid could underwent degenerative process or erosion resulted in fragile surface with some bleeding and necrotic. And such case was very interesting yet rare. We present two cases of cervical fibroid with cervical elongation resembling malignancy managed in our national referral-academic hospital. This case report has been reported in line with the SCARE criteria [3].

2. Patient information

Our first Case was A 59 years old, P5A0 lady being referred to our emergency room due to intractable vaginal mass since one day before admission. She admitted that the vaginal mass was came out

* Corresponding author.

E-mail address: nh.gita@yahoo.com (G.N. Hidayah).

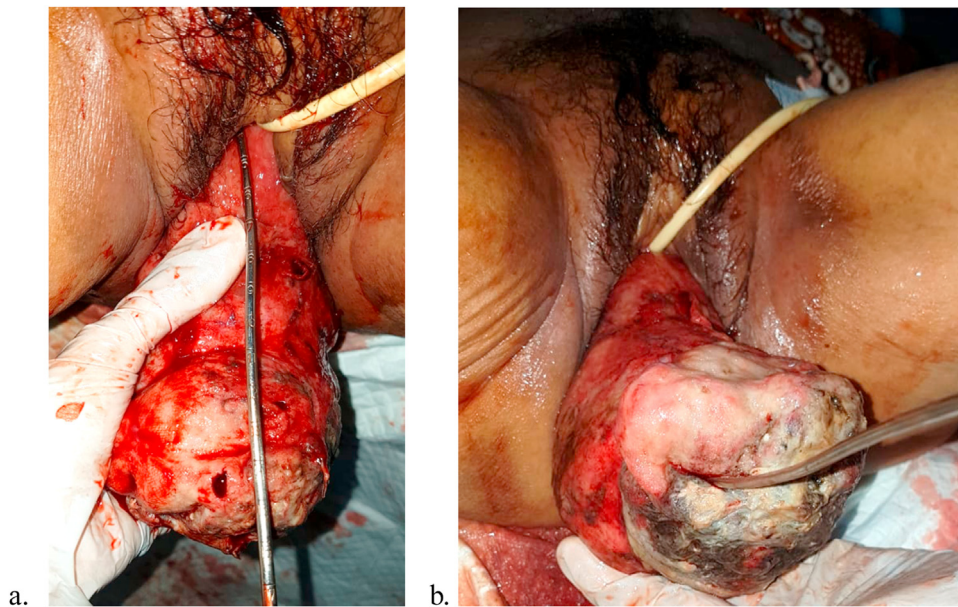


Fig. 1. First case. The mass protruded 14 cm outside the vagina with some necrotic and bleeding area resembling cervical malignancy (a), and the soundage was retrained 4 cm (b).

while she was defecating, as big as hand fist, painless, and could not be repositioned push back into her vagina. She admitted bleeding from the vaginal mass and she went to a hospital then she was being referred to our hospital. She admitted no history of chronic vaginal bleeding/ vaginal discharge, and never felt bulky mass in her vagina before. She also declined history of fibroid, history of lower abdominal mass, or history of voiding disturbance. She could hold her urine for 4 h, voids 4 times a day, no nocturia, and no severe urge to void. She defecated once a day, with normal bowel pattern.

She had been menopausal for 5 years, married two times and sexually active. She had no surgical history before. She delivered 5 children vaginally with the biggest baby's weight 3500 g, her youngest child was 25 year old. No other significant previous medical condition, surgical procedure history, nor family history.

Our second case was Mrs 53-year-old P4 A0 who was being referred to our urogynaecology clinic chief complain vaginal mass since last year admitted that the mass was initially small, protruded only on activity and could be pushed inside the vagina. Since 7 months ago the mass has been bigger and could not be inserted into vagina. She admitted incidental bleeding from the mass, but no pain and no voiding complain (she could control her voiding, no nocturia, no urinary incontinence). Since last week she felt that the mass was so disturbing and made her difficult to walk. She went to hospital, then being referred to our centre. She has been menopausal for 5 years. She was sexually active until the last 7 months. She delivered 4 children spontaneously, biggest baby born was 3000 g, the youngest child was 15-year-old. No other significant previous medical condition, surgical procedure history, nor family history.

3. Clinical finding

On our first case, at her initial evaluation we found her in anaemic and tachycardia condition, with abdomen palpation was not remarkable. We found a bulky vaginal mass exceeding hymenal ring, 14 × 7 × 6 cm sized, with some necrotic and discharge, foul smelling, and some bleeding area. The mass was solid, tender and bleeding on palpation. The external uterine orificium was identified at the edge of the mass with resisted 4 cm at sound insertion. We did

speculum examination on posterior part of the mass, the posterior vaginal mucous was smooth. The bimanual rectal toucher evaluation found uterine corpus was within normal shape and shape, located in the pelvic in retroflexed axis. No pathologic adnexal mass palpated. On POP-Q evaluation, the C point was +14, D point was 0, BA point was -3, BP point was -3 (Fig. 1).

For our second case, she had obesity (BMI 28.4 kg/m²), her abdomen palpation was not remarkable. On inspection we found globular vaginal mass exceeding hymenal ring, with some necrotic and reddish surface. The mass was 12 × 9 × 6 cm with foul smelling, discharge, and some blood. The anterior and posterior vaginal mucous were smooth and had been expelled outside. The cervical opening was found cranial to the mass at the posterior site of the mass, sound inserted for 14 cm. The mass was firm, tender in palpation, bleed on palpation.

On rectal toucher bimanual we found the anal mucous was smooth with good anal sphincter tone, the normal-shaped uterine corpus palpated in posterior caudal of the bladder, the cervical part was elongated and connected to the vaginal mass. No adnexal mass palpated. On POP-Q evaluation the C point was +11, D point was +3, BA point was +8, and BP point was +7. This corresponded also with anterior and posterior compartment prolapse (Fig. 2).

4. Diagnostic assessment

On our first case, the ultrasound evaluation revealed a normal retroflexed uterine corpus, with 3.9 mm endometrial thickness. The cervical area was enlarged connected with the protruded hyperchoic mass with size 15.38 × 5.14 × 6.15 cm correspond to cervical fibroid with differential diagnosis cervical malignancy. Her mass biopsy result was necrotic tissue without any evidence of malignancy (Fig. 3).

On our second case, ultrasound evaluation revealed normal uterine corpus with a cervical mass on anterior lip with elongated cervix. The mass was 11.34 × 12.5 × 8.48 cm with anteflexed uterus 6.3 × 3.6 6.8 cm sized with elongated cervix connected to the mass. The histopathology result of the mass biopsy was necrotic tissue with acute and chronic inflammation. No sign of malignancy (Fig. 4).

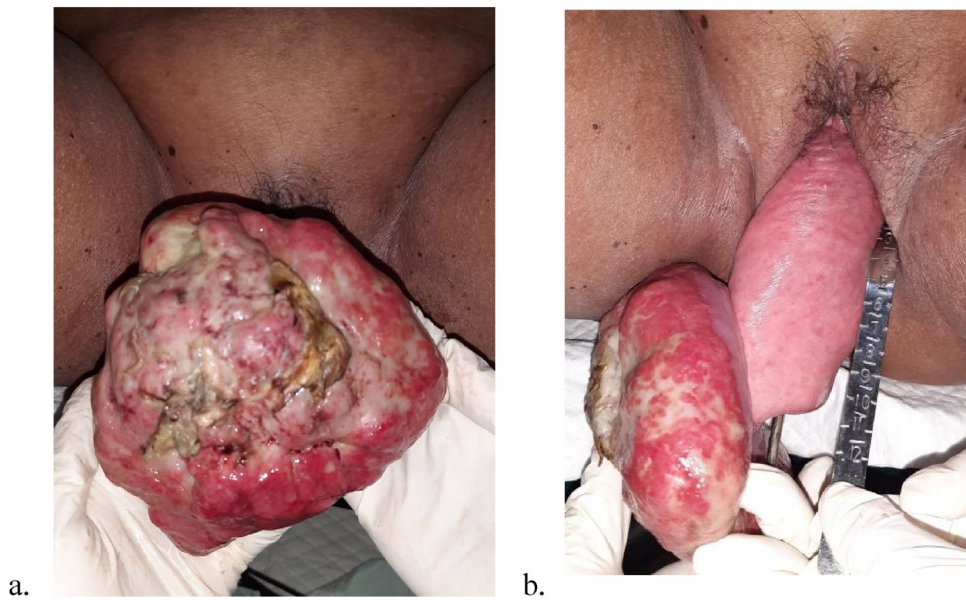


Fig. 2. Second case. Mass with some necrotic and reddish surface resembling cervical malignancy (a), protruded 12 cm outside vagina with 14 cm sound (b).

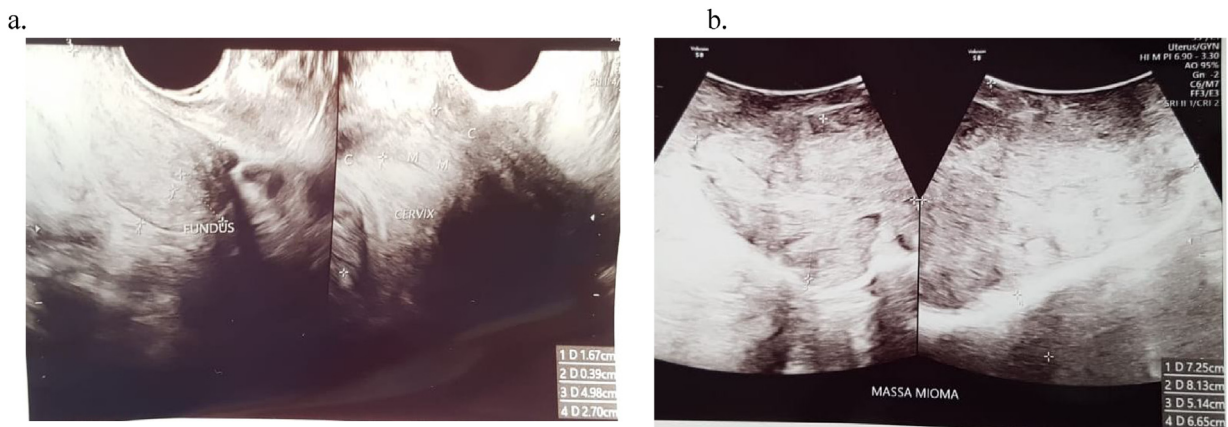


Fig. 3. First case. Ultrasound evaluation revealed normal retroflexed uterine corpus (a), With vaginal mass correspond to fibroids or cervical malignancy (b).

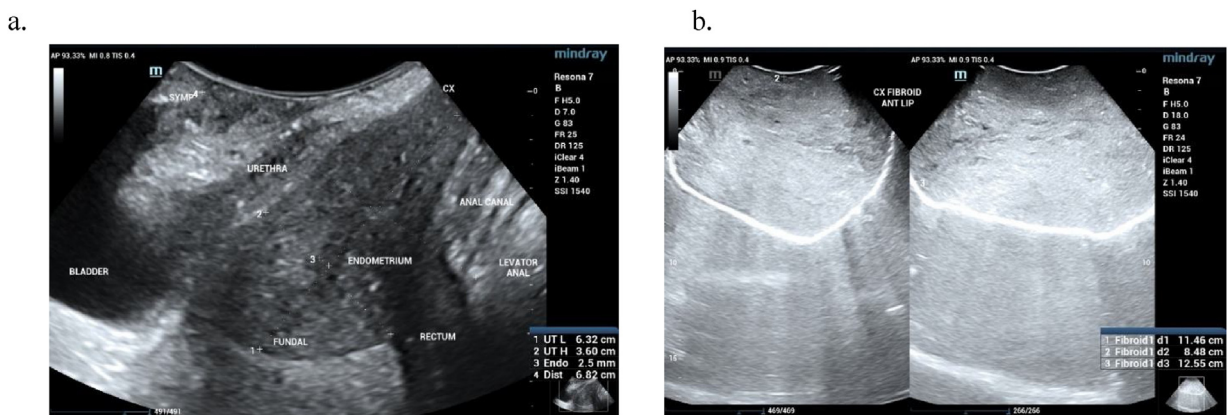


Fig. 4. Second case. Ultrasound evaluation revealed normal uterine corpus (a), Cervical mass on anterior cervical lips (b).

5. Therapeutic intervention

Both of our cases were managed by urogynecologist. Our first case underwent Manchester-Stumdorf procedure. On exploration we found cervical length 14 cm (all together with the cervical

fibroid mass), we identified the planned incision area, 12 cm proximal from the edge of the mass, leaving 2 cm of the healthy cervix structure. We did hydro dissection on vaginal mucous encircling cervix at the prepared incision area.

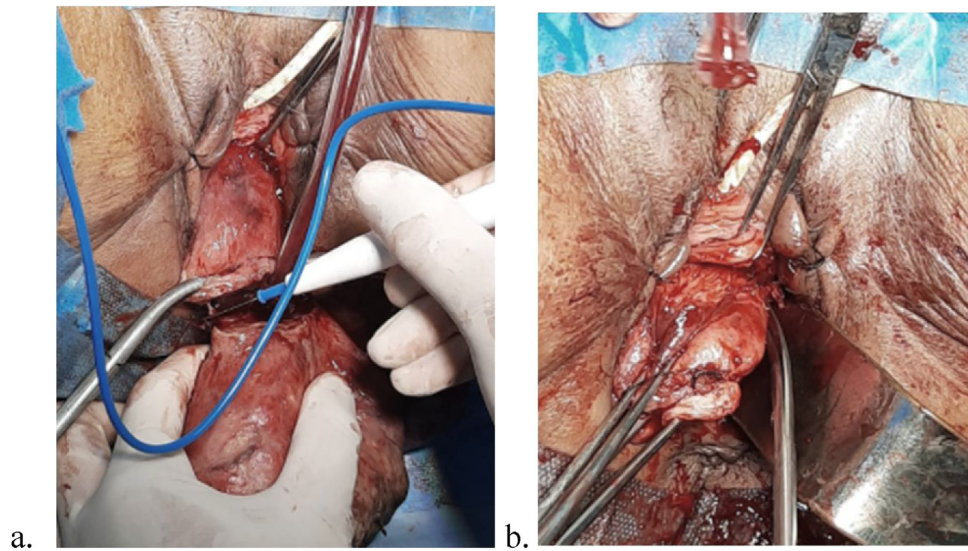


Fig. 5. First case. Reducing bulky fibroids mass (a), continued by Manchester-Fothergill procedure (b).

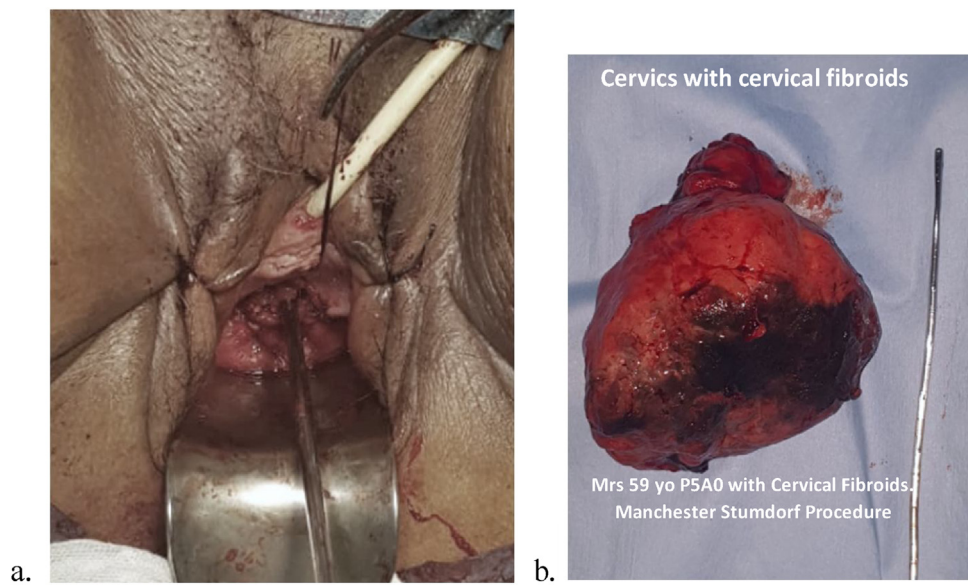


Fig. 6. First case. After procedure view (a), taken out the elongated cervixes with cervical fibroids (b).

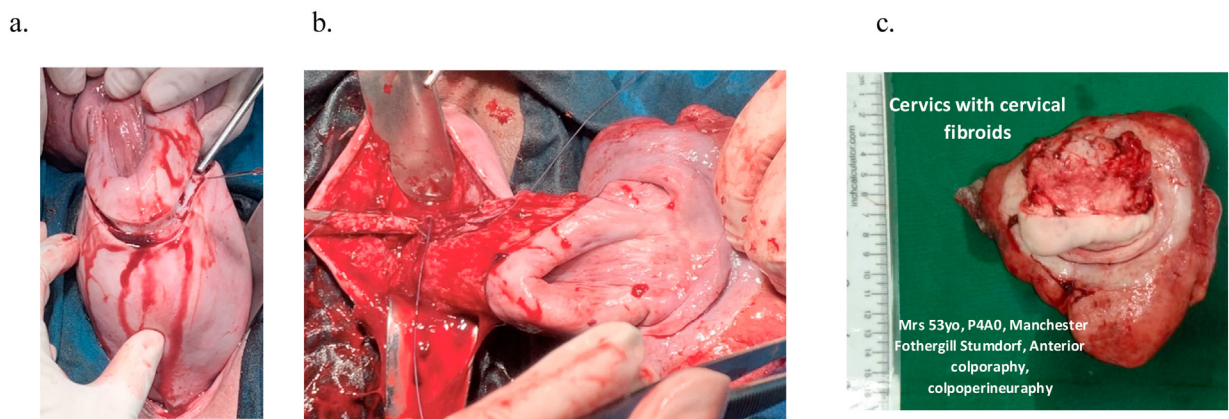


Fig. 7. Second case. We did Manchester Fothergill Stumdorf (a, b), we taken out the elongated cervixes with cervical fibroids (c).



Fig. 8. Second case, four months after procedure.

For better exposure and surgical field view we cut the bulky fibroids at the edge of the healthy cervix area first. Then we did circular incision on the vaginal mucous. We dissected the vaginal mucous, exposing the cervical tissue. We cut the cervix, leaving 2 cm of healthy cervix; and controlled the bleeding. We did the Stumdorf stitch on the remaining cervix and vaginal mucous (Fig. 5).

We did Manchester Fothergill Stumdorf, anterior colporaphy, and colpoperineoraphy on the second case. On initial evaluation we found the cervical length was 15 cm. We marked the surgical border, manage to leave 2 cm healthy cervical tissue. The cervical tissue was cut 7 cm, along with the cervical fibroid on the anterior lips. The uterine sound was 8 cm. On evaluation we found the anterior and posterior compartment prolapse was still prominent, we continue to do anterior colporaphy. The cervical stump then being covered by vaginal mucous (Stumdorf procedure), then we did the colpoperineoraphy (Fig. 6).

6. Follow up and outcome

Both of our case was clinically stable after the procedure. The first case was not reachable for long term evaluation at the outpatient clinic, but the second case was come to our urogynecological clinic and her surgical wound was healed appropriately. In her perspective, she was satisfied with the medical management (Fig. 7).

On our first case, the histopathology result was fibroids with cervical retention cyst and atrophic endometrium. On our second case, the histopathology result was uterus with chronic endomyometritis with abscess formation, no malignancy (Fig. 8).

7. Discussion

Approximately 40% of women with pelvic organ prolapse have cervical elongation [4]. A study by Hsiao found that 46.1% women with uterine prolapse had also a cervical elongation [5]. Berger defined cervical elongation as an absolute cervical length greater than 33.8 mm [1]. Cervical length itself is measured from internal uterine ostium to external uterine ostium [5]. Other study used length between internal to external cervical ostium ≥ 5 cm as criteria for cervical elongation [6]. Uterine prolapse could be found together with cervical elongation. This could be due to the prolapsed uterus had longer cervixes or the descent of the developing prolapse induced cervical elongation through downward traction [1]. Growing cervical mass could drag the cervix, predisposing to

cervical elongation and prolapse [2]. Cervical cancer is one of the most prevalence cancer in woman. Cervical cancer could be manifested as fragile cervical mass with some bleeding and necrotic. Cervical fibroid commonly manifested as solid-bulky cervical mass with smooth surface. But in some case the fibroid could underwent degenerative process or erosion resulted in fragile surface with some bleeding and necrotic similar to cervical malignancy.

According to Hsiao, the risk factor for cervical elongation in uterine prolapse were lower parity (≤ 3) and advanced uterine prolapse stage [5]. In our cases, the parity was more than 3, and the uterine prolapse (before the elongated cervixes with cervical fibroids is corrected) were advanced. Cervical fibroids protruded through vagina was usually pedunculated. But in our cases, the fibroids were not pedunculated but manifested as a bulky mass on the cervical tissue. This clinical feature mimicked the clinical presentation of cervical malignancy too. But the biopsy from the second case found no malignancy while the first case's biopsy was only necrotic tissue. But on the final pathology evaluation, there were no malignancy on both cases. Yi at 2009 reported a case with benign lesion (cervical polyp) with clinical presentation mimicking cervical malignancy. They did biopsy and found no malignancy [7].

Cervical elongation could cause uterine prolapse without uterine descent. In such patient, the Level I pelvic floor support were relatively intact, compared to other patient having cervical elongation with uterine descent [8]. The "true cervical elongation" could be distinguished from the uterine descent by POP-Q examination where the D point would be relatively high [8]. In our first patient, the C point was +14 with D point 0, prior surgery we considered that she had apical compartment prolapse. But after the Manchester procedure the cervical bulky mass was relieved leaving the pelvic floor less burden, we found that the D point was corrected into -7 and the left cervical part (the new C point) was -5. As the and the Ba and Bp was -3, it turned out that the first case might be the true cervical elongation without significant pelvic floor dysfunction.

Both our cases had cervical fibroids with cervical elongation, but on the first case there were no pelvic organ prolapse while on the second case with pelvic organ prolapse. This might be correlates with the duration of vaginal mass which was one day before on the first case compared to one year on the second case; that could expose second patient's the pelvic floor more burden. It was also possible that on the second case there was already existing pelvic floor dysfunction that worsened as the cervical fibroids protruded through vagina. As the pelvic floor dysfunction on the second case required pelvic floor reconstruction, we did anterior colporraphy and colpoperineoraphy concomitantly with Manchester Fothergill Stumdorf procedure; while in the first case we did only Manchester Stumdorf procedure.

Manchester Fothergill is considered an affective procedure for cervical elongation without pelvic organ prolapse. A study compared Manchester procedure with uterosacral ligament plication had no middle compartment prolapse recurrence in one year follow up compared to vaginal hysterectomy [9]. The Manchester procedure gives us shorter surgery length and less surgical complication compared to vaginal hysterectomy [8]. Park study reported a lower middle compartment prolapse recurrence on the case with anterior compartment prolapse that underwent anterior colporraphy concomitantly with Manchester procedure. This might be due to the correction or benefit of apical support from the corrected anterior support; as we have known before that some part of anterior compartment support also contribute to apical compartment support [8]. Manchester procedure also meet patient's needs where the uterus is expected to be preserved [8]. In our cases both patients has been menopausal and had complete family member but we choose the Manchester procedure as it was a less invasive procedure with high effectivity, yet less surgery length and less surgical complication.

The limitation of this study was we were unable to reach the first case for long term follow up. But still, we could learn things from these cases such as the importance of preoperative biopsy assessment in such case mimicking malignancy.

8. Conclusion

In our cases, clinical presentation was mimicking the cervical malignancy. Thus, biopsy is compulsory to determine the diagnosis and to lead the management. As our preoperative biopsy were not malignant, we managed the patient vaginally by Manchester Fothergill, and do the colporaphy as needed. As we tried to find literature describing uterine prolapse with cervical elongation correlates with cervical fibroids, we found that such literature/ report was still rare. Thus, this case series is important for the scientific perspective.

Declaration of Competing Interest

The authors report no declarations of interest.

Funding

There is no funding or sponsorship on this case series.

Ethical approval

As this is a case series, with no clinical trial or new procedure/ drug introduced, no ethical approval provided.

Consent

The first case was not reachable after treatment. We provide letter from our head of medical team to support. The second case has given the written consent. Below are the two documents.

Author contribution

Fernandi Moegni: Main author providing concept, revision, and final approval.

Surahman Hakim: Contribute in the writing concept.

Gita Nurul Hidayah: Data collection, data analysis, writing and revising manuscript.

Suskhan: Developing and revising manuscript.

Tyas Priyatini: Developing and revising manuscript.

Alfa Putri Meutia: Developing and revising manuscript.

Budi Iman Santoso: Developing and revising manuscript.

Registration of research studies

Not applicable.

Guarantor

Fernandi Moegni.

Surahman Hakim.

Suskhan.

Tyas Priyatini.

Alfa Putri Meutia.

Gita Nurul Hidayah.

Budi Iman Santoso.

Provenance and peer review

Not commissioned, externally peer-reviewed.

References

- [1] M.B. Berger, R. Ramanah, K.E. Guire, J.O. DeLancey, Is cervical elongation associated with pelvic organ prolapse? *Int. Urogynecol. J.* 23 (8) (2012) 1095–1103.
- [2] G. Gurung, A. Rana, D.B. Magar, Utero-vaginal prolapse due to portio vaginal fibroma, *J. Obstet. Gynaecol. Res.* 29 (3) (2003) 157–159.
- [3] R.A. Agha, C. Sohrabi, G. Mathew, T. Franchi, A. Kerwan, N. O'Neill, for the PROCESS Group, The PROCESS 2020 guideline: updating consensus preferred reporting of CasE series in surgery (PROCESS) guidelines, *Int. J. Surg.* 84 (2020) 231–235.
- [4] M. Mitterberger, G.M. Pinggera, R. Marksteiner, E. Margreiter, M. Fussenegger, F. Frauscher, et al., Adult stem cell therapy of female stress urinary incontinence, *Eur. Urol.* 53 (1) (2008) 169–175.
- [5] S.M. Hsiao, T.C. Chang, C.H. Chen, Y.I. Li, C.T. Shun, H.H. Lin, Risk factors for coexistence of cervical elongation in uterine prolapse, *Eur. J. Obstet. Gynecol. Reprod. Biol.* 229 (2018) 94–97.
- [6] Tyas Priyatini, Lucky Savitry, Shirley Anggraini, Kuku Wibowo Winarto, Finish Fernando, Pelvic organ prolapse quantification accuracy for elongasio cervix diagnose in pelvic organ prolapse patients, *INAJOG* (2020).
- [7] K.W. Yi, S.H. Song, K.A. Kim, W.Y. Jung, J.K. Lee, J.Y. Hur, Giant endocervical polyp mimicking cervical malignancy: primary excision and hysteroscopic resection, *J. Minim. Invasive Gynecol.* 16 (4) (2009) 498–500.
- [8] Y.J. Park, M.K. Kong, J. Lee, E.H. Kim, S.W. Bai, Manchester operation: an effective treatment for uterine prolapse caused by true cervical elongation, *Yonsei Med. J.* 60 (11) (2019) 1074–1080.
- [9] T.A. de Boer, A.L. Milani, K.B. Kluivers, M.I. Withagen, M.E. Vierhout, The effectiveness of surgical correction of uterine prolapse: cervical amputation with uterosacral ligament plication (modified Manchester) versus vaginal hysterectomy with high uterosacral ligament plication, *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 20 (11) (2009) 1313–1319.

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