Asian Research Journal of Gynaecology and Obstetrics

3(1): 12-15, 2020; Article no.ARJGO.57021

Clinical Outcomes of Arabin Pessary Usage for Acute Urinary Retention and Uterine Prolapse during Pregnancy: A Case Report in Southeast Asia

Quek Yek Song[1], Carla Cai Zi[1*], Tok Sin Lei[1] and Jamiyah Binti Hassan[2]

[1]Clinical School Johor Bahru, Jeffrey Cheah School of Medicine and Health Sciences, Monash University Malaysia, Johor Bahru, Malaysia.
[2]Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Malaya, Malaysia.

Authors' contributions

This work was carried out in collaboration among all authors. Author QYS designed the study and wrote the first draft of manuscript. Authors CCZ and TSL managed the literature searches and completed the final version of the manuscript with the input from all authors. Author JBH supervised the project. All authors read and approved the final manuscript.

Article Information

Editor(s):
(1) Dr. B. Eghon Guzman, Hospital Dr. Sotero del Rio, Chile.
Reviewers:
(1) Ahmed Altraigey, Benha University, Egypt.
(2) C. Stalin, Indian Pharmacopoeia Commission, India.
Complete Peer review History: http://www.sdiarticle4.com/review-history/57021

Case Report

Received 07 March 2020
Accepted 14 May 2020
Published 22 May 2020

ABSTRACT

Acute urinary retention (AUR) is a rare obstetric emergency that requires prompt intervention before the development of irreversible maternal and foetal complications. To our knowledge, there is no published large-scale clinical trial on Arabin cerclage pessary usage in the combined issues of AUR and uterine prolapse in pregnancy. This case report describes the case of a 29-year-old gravida 2 para 1 woman with intrauterine pregnancy at 13 weeks of amenorrhea presented to the emergency department with suprapubic pain and inability to void. She has no past history of urogynaecological complaint and was subsequently catheterized with a Foley catheter. Within the next 12 hours, she presented with the same complaint. Gynaecological examination revealed grade 1 uterine prolapse with cystocele. A repeated catheterization for bladder drainage was done followed by insertion of an Arabin cerclage pessary due to the persistence of symptoms. Her symptoms resolved immediately without any complications and recurrence. She then delivered at term via lower segment caesarean section (LSCS). Therefore, Arabin cerclage pessary insertion could be used in pregnancy for woman with acute urinary retention and uterine prolapse beside its official indication.

**Corresponding author: E-mail: czcai1@student.monash.edu;*

Keywords: Arabin cerclage pessary; pregnancy; acute urinary retention; uterine prolapse.

1. INTRODUCTION

Pregnancy, uterine prolapse and bladder prolapse (cystocele) are often interrelated. Cervical pessary has been designed and used for the treatment of prolapseas well as prevention of preterm labour for years. Although various types of pessaries have been designed and used, there is no single design of pessary to solve all the issues.

Acute urinary retention (AUR) as defined by the inability to void and a retained of urine volume of 200ml or greater is a relatively rare complication which can lead to real emergency in early pregnancy [1,2]. Even though studies have conducted showing the efficacy of pessary in prevention of preterm labour, there are relatively few cases reported using Arabin pessary for treatment of AUR in pregnancy [3]. This is the first case reported in Southern Asian using Arabin cerclage pessary as treatment for AUR in pregnancy.

2. PRESENTATION OF CASE

A 29-year-old gravida 2 para 1 woman was confirmed intrauterine pregnancy at 8 weeks of amenorrhea without any significant past medical and surgical history. She has no past history of urogynaecological complaint. At 13 weeks of gestation, she presented to the emergency department complaining of a mass prolapsed to near introitus with a sudden inability to void and severe hypogastric pain. Gynaecological examination revealed an anteverted gravid uterus of 12 weeks and grade 1 uterine prolapse with palpable bladder. Obstetrical ultrasound shown a normal fetus at 12 weeks of gestation with fetal heart present and no other masses in the uterus and adnexal area. Cervical length of 2.7cm was measured via a transvaginal ultrasound. Speculum examination noted stage 1 uterine prolapse with mild cystocele and normal cervix. No stress incontinence was elicited. A diagnosis of acute urinary retention was made and she was immediately catheterized. A collection of 500cc urine was removed and the infective screen was negative. Unfortunately, she required another catheterization in the next 12 hours as her symptoms persisted.

After discussion with patient regarding the treatment options which include intermittent self-catheterization and insertion of pessary ring, patient took a while to come to the decision of inserting Arabin pessary ring as intermittent self-catheterization was claimed to be more troublesome and uncomfortable. An Arabin pessary was then inserted in the clinic and patient reported a rapid resolution of symptoms. During the subsequent 7 follow-ups in the clinic, patient denied any recurrent symptoms, discomfort or per-vaginal discharge. She was able to adjust perfectly with pessary inserted and there was no complaint of pessary failing out. Her pregnancy progressed well without any complications and was consented for a LSCS at term to avoid worsening of utero-vaginal defects. She has successfully given birth to a baby boy weighing 2,650g at term and the Arabin cerclage pessary was eventually removed during the LSCS.

3. DISCUSSION

Acute urinary retention (AUR) is a relatively rare complication in pregnancy and it peaks between the 10^{th} and 16^{th} gestational weeks when the enlarging, retroverted, gravid uterus becomes impacted within the pelvis, causing an extrinsic compression to the urethra [4-8]. Even though AUR is a rare complication, it is an emergency which necessitates urgent assessment and intervention to prevent serious complications such as irreversible uterine ischemia, spontaneous abortion, rupture of uterus or bladder, rectal gangrene, intrauterine infection or death [4,9]. Other causes of AUR during pregnancy may be due to retroflexed uterus, lumbar disc hernation, paraurethral abscess, breech presentation, ectopic pregnancy, and conversion psychological disorder [6].

In the case of suspected AUR, a rapid physical examination should be carried out followed by immediate catheterization of bladder and manual reduction of the prolapsed uterus to achieve successful obstetrics outcome. This is also reported by Han et.al in which a patient diagnosed with AUR from uterine incarceration secondary to pelvic adhesion has been successfully treated with an attempt of indwelling catheter and manual repositioning of uterus [6]. Unfortunately, a combination treatment with indwelling catheter and prophylactic antibiotics in treating a patient diagnosed with AUR as proposed in the case report by Clare had led to a poor obstetrics outcome of preterm premature rupture of membrane (PPROM) and fetal demise in second trimester [8].

Indwelling catheterization or intermittent self-catheterization has always been the primary treatment in patient presented with repeated episode of AUR [10,11]. Unfortunately, this can be challenging and traumatizing for the patient. The risk of urinary tract infection increases with long-term indwelling urinary catheter (IDC) in situ and frequent self-catheterization which in severe cases can lead to preterm premature rupture of membrane, preterm labour, intrauterine death and maternal sepsis. Additionally, each catheterization can cause great discomfort and severe complications with incorrect technique used such as urethral bleeding, false passage and even urethral strictures [12]. Self-catheterization can also be challenging in pregnancy as gestation increases.

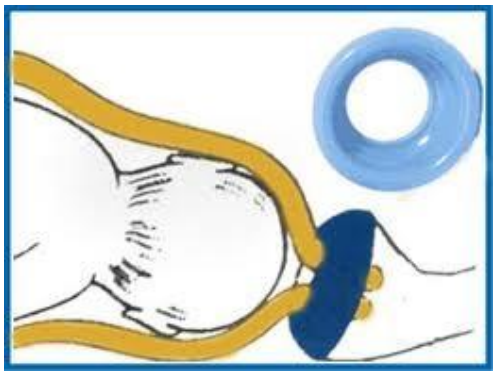

Fig. 1. Cerclage pessary in place [13]

Fig. 2. ARABIN® cerclage pessary ring [14]

Considering all the possible complications of catheterization, an alternative treatment with pessary ring has been chosen for our patient to keep the uterus in an anterior position and maintain a normal vesico-urethral angle [2]. As there is no specific pessary designed for the combined uterine prolapse and acute urinary retention in pregnancy, an Arabin® cerclage pessary (Fig. 2) was selected. This is because it is specifically designed for pregnancy use in prevention of preterm labour while other pessary rings are designed only to treat genital prolapsed [15]. The insertion of pessary ring can be removed at the beginning of second trimester of the pregnancy. However, in this case, it was left in-situ until LSCS was done. There was no complication reported and it is possible to prevent the worsening of uterine prolapse throughout the pregnancy [2].

4. CONCLUSION

This very first case report in the Southeast Asia in which Arabin pessary was used in treating AUR and uterine prolapse in pregnancy beside its official indication of preventing premature labour has illustrated a successful pregnancy outcome in our patient. Additionally, it is not associated with complications such as vaginal infection and threatened preterm delivery. Thus, it is demonstrated that Arabin pessary can be considered as an alternative treatment forpatients with similar presentation in future. As there is limited research supporting the use of Arabin ® cerclage pessary in concurrent AUR and uterine prolapse, prospective trial to prove its efficacy is necessary for evidence-based practice.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Ramsey S, Palmer M. The management of female urinary retention. International Urology and Nephrology. View at Publisher View at Google Scholar · View at Scopus. 2006;38(1):533-5.

2. Chauleur C, Vulliez L, Seffert P. Acute urine retention in early pregnancy resulting from fibroid incarceration: Proposition for management. Fertility and Sterility. 2008; 90(4):1190.e7-1198.
DOI: 10.1016/j.fertnstert.2007.10.008
3. Varea AM, Alfonso FN, Almela VJ, Marin AP. Arabin cerclage pessary as treatment of an acute urinary retentionin pregnant woman with uterine prolapse. Hindawi Publishing Corporation: Case Report in Obstetrics and Gynaecology. 2013;(2).
DOI: 10.1155/2013/161376
4. Nelson MS. Acute urinary retention secondary to an incarcerated gravid uterus. American Journal of Emergency Medicine, 1986;4(3):231.
DOI:https://doi.org/10.1016/0735-6757(86)90074-4 View at Google Scholar · View at Scopus
5. Myers DL, Scotti RJ. Acute urinary retention and the incarcerated, retroverted, gravid uterus: A case report. Journal of Reproductive Medicine for the Obstetrician and Gynecologist. 1995;40(6):487-90.
6. Devoe RW. Acute urinary retention in pregnancy, report of a case. California Medicine. 1956;85(2):112-3.
7. Han C, Wang C, Han L, Liu G, Li H, She F, Xue F & Wang Y. Incarceration of the gravid uterus: a case report and literature review. BMC Pregnancy Childbirth. 2019; 19(408).
DOI:https://doi.org/10.1186/s12884-019-2549-3
8. Clare CA. Urinary retention in the case of retroverted uterus in pregnancy. Obstet Gynaecol Cases Rev. 2020;7(2):163.
DOI:https://doi.org/10.23937/2377-9004/1410163
9. Chen JS, Chen SCC, Lu CL, Yang HY, Wang P, et al. Acute urinary retention during pregnancy: A nationwide population- based cohort study in Taiwan. Medicine. 2016;95(13):e3265.
DOI: 10.1097/MD.0000000000003265
10. Yohannes P. Ultrasound in acute urinary retention and retroverted gravid uterus. Ultrasound in Obstetrics and Gynecology. 2004;23(5):427.
11. Maharaj D, Gajanayaka M. Acute urinary retention in pregnancy: A case presentation and review of the literature. European Clinics in Obstetrics and Gynaecology. 2008;2008(3).
DOI: 10.1007/s11296-008-0079-z
12. Biardear X, Corcos J. Intermittent catheterization in neurologic patients: update on genitourinary tract infection and urethral trauma. Annals of Physical and Rehabilitation Medicine. 2016;59(2016): 125-129.
Available:http://dx.doi.org/10.1016/j.rehab.2016.02.006
13. Pessaries used during pregnancy. Cerclage pessary in place.
Available:https://yourpessary.weebly.com/pessaries-during-pregnancy.html
14. Dr.Arabin GmnH & Co. KG. Products: ARABIN® Cerclage Pessary perforated.
Available:https://dr-arabin.de/product-category/products/obstetrics/?lang=en
15. Arabin B, Alfirevic Z. Cervical pessaries for prevention of spontaneous preterm birth: Past, present and future. Ultrasound Obstet Gynecol. 2013;42(1):390-9.
DOI:10.1002/uog.12540

Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/57021