Tropical Journal of Obstetrics & Gynaecology
ISSN-Print: 0189-5117
Online: 2543-148X
Official Publication of Society of Obstetrics & Gynaecology of Nigeria

Case Report

Manchester- Fothergill Procedure for Treatment of Utero-Vaginal Prolapse in Young Women: A Case Series Report of 5 Women

Michael T. Maanongun,[1] Jonathan Karshima,[2] Andrea Ornguze,[1] Benard T. Utoo,[1] John H. Damter[3]

[1]*Department of Obstetrics and Gynaecology, College of Health Sciences, Benue State University Makurdi*
[2]*Department of Obstetrics and Gynaecology, Faculty of Medical Sciences, University of Jos*
[3]*Janik Specialist Hospital, Hwolshe, Jos*

ABSTRACT

There is scarcity of local data in current literature concerning Manchester procedure for the repair of Utero Vaginal Prolapse (UVP). We report our experiences of patients who had fertility sparing procedures (Manchester repair) for second and third degree UVP between 2010 and 2018 at the Benue State University Teaching Hospital Makurdi, Holy Family Hospital Ikom, Cross River State and Janik Specialist Hospital, Hwolshe, Jos, all in Nigeria. The average age of the patients was 27.6 years. Three women were nulliparous and 2 were primiparous, and all the five women wanted to preserve their fertility. The duration of the surgery was 110 ±20 minutes and the average hospital stay was 4±1 days. There were no intra-operative or post-operative complications observed in the series. All the women were satisfied with the procedure and their sexual life was improved. Two women became pregnant and both were delivered through caesarean section at term. All the women had good anatomical results and there were no symptoms of prolapse recurrence. With these results, Manchester repair is certainly worth considering for the treatment of UVP especially in women who wish to preserve their reproductive career.

Keywords: Manchester repair; Utero vaginal prolapse; Nulliparous; Primiparous.

Corresponding Author

Maanongun, Michael Tyodoo,
Dept. of Obstetrics & Gynaecology,
College of Health Sciences,
Benue State University Makurdi
E-mail: maanongun@yahoo.com
Phone: +2348105337096

Introduction

Utero-vaginal prolapse (UVP) also known as Pelvic-Organ prolapse (POP) is defined as the descent of the uterus and cervix and sometimes the bladder and rectum into the vaginal canal towards the introitus.[1] It is a quality of life-altering condition which is rare among the young and nulliparous.[2] This condition affects 2% of

nulliparous women compared to 50% of multiparous women[3] Generally, some degree of uterine descent is common in multiparous women; however, symptomatic UVP is not common in women during their reproductive years.[1]

The aetiology of UVP/POP in young women is multifactorial; namely, congenital spinal defects, malnutrition, chronic lung disease, heavy labour work etc.[4]

Treatment options for UVP include both surgical and non-surgical modalities, but the failure rate of non-surgical approaches is high. Surgical options, in particular, vagina hysterectomy, are the standard treatment in these cases. The treatment of advanced UVP in young nulliparous women poses a significant dilemma and challenge because hysterectomy may not be acceptable to these young women due to the associated sterility, body image and sexuality issues.[5] In these groups, the desired fertility preservation is critical and the Manchester-Fothergill procedure (Manchester Repair) should be considered.

Only a limited amount of information exists in the current literature regarding this surgical method.[1,6] The aim of this paper is to report our experiences with this rare procedure in young women with UVP who wish to preserve their fertility.

Cases Report (Method)

A total of 5 cases that were carried out between January 2010 and December 2018 were reviewed. Two of these cases were done at Holy Family Hospital Ikom, Cross River State, 2 at Benue State University Teaching Hospital and 1 case at a Private Hospital in Jos, Plateau State, all in Nigeria.

The records of these women who were either nulliparous or primiparous and who had suffered from either second or third degree UVP were reviewed. Consent was obtained before surgery and approval from the institutional review Board was obtained as appropriate. Data regarding age, clinical presentation, operation time, presence of intra-operative and post-operative complications, duration of hospital stay and follow up were extracted from the case files. Statistical analyses were conducted as appropriate.

The Manchester procedure for all five cases was done as previously described[7] without individual modification. The major steps included detachment of the cardinal and utero-sacral ligaments from their lateral attachments to the cervix, re-attachments of these ligaments to the anterior aspects of the cervix, amputation of the cervix and finally application of the Sturmdorf suture which was used to cover the cervical stump with vaginal mucosa. [figures 1-4].

Observation and Results

The mean age of the five women was 27.6 years. All of them presented with a protruding mass through the vagina, 2 (40%) women complained of stress incontinence and 3 (60%) women complained of waist pain. One (20%) woman complained of foul-smelling vaginal discharge and the same woman complained of low-grade fever that needed antibiotic therapy before surgery. One (20%) woman presented with a cervical ulcer. All the women had some form of sexual dysfunction or dissatisfaction.

The average duration of the procedure was 110±20 minutes and the average hospital stay was 4±1 days. The average blood loss was 250±50 mls. No intra-operative or post-operative complications were observed. One patient needed blood transfusion due to pre-operative anaemia to enhance wound healing.

All the women were satisfied with the procedure. All of them said their sexual life was greatly improved. Two of the three patients that were unmarried got married. Two patients became pregnant after the procedure with both delivered by caesarean section. The other three did not get pregnant out of choice. All the five women had good anatomic results and there were no urinary incontinence nor symptoms of prolapse recurrence at follow up.

Table 1: Distribution of women by age, parity and marital Status

Variable	Number of Cases	Percentage (%)
Age		
≤25	1	20
26-30	3	60
31-35	1	20
Parity		
Nulliparous	3	60
One	2	40
Marital Status		
Married	2	40
Unmarried	3	60

Table 2: Clinical Features

Clinical Features	Number of Patients	Percentage (%)
Something protruding from vagina	5	100
Elongated cervix	5	100
Leucorrhoea	2	40
Back ache	3	60
Cervical ulcer	1	20
Difficulty in urinating	1	20
Urinary stress incontinence	2	40
Foul smelling vaginal discharge	1	20
Cystocoele	1	20
Sexual Disharmony	5	100
Degree of descent 20	2	40
Degree of descent 30	3	60

2^0 descent: The most distal portion of the prolapse is 1cm or less proximal or distal to the hymenal plane
3^0 descent: The most distal portion of the prolapse protrudes more than 1cm below the hymen but protrudes no further than 2 cm less than the total vaginal length

Table 3: Post-Operative Results

Clinical Features	Number of Patients	Percentage (%)
Satisfaction with surgery	5	100
Sexual satisfaction	5	100
Married after surgery	2	40
Pregnant after surgery	2	40
Term delivery after surgery	2	40
Total married	4	80
Yet to marry	1	20

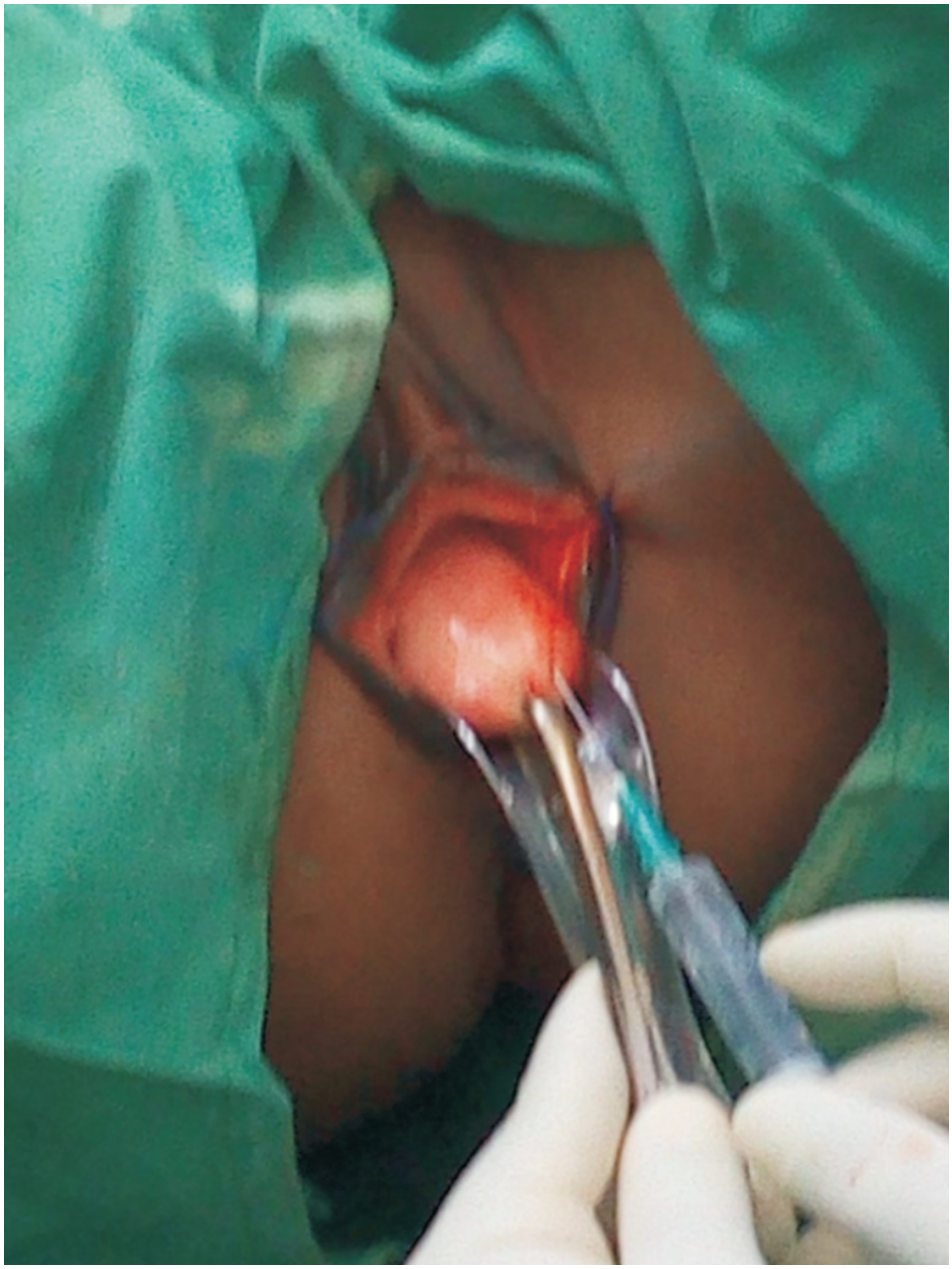

Figure 1: Infiltration of the vaginal mucosa with normal saline mixed with adrenaline before commencement of dis

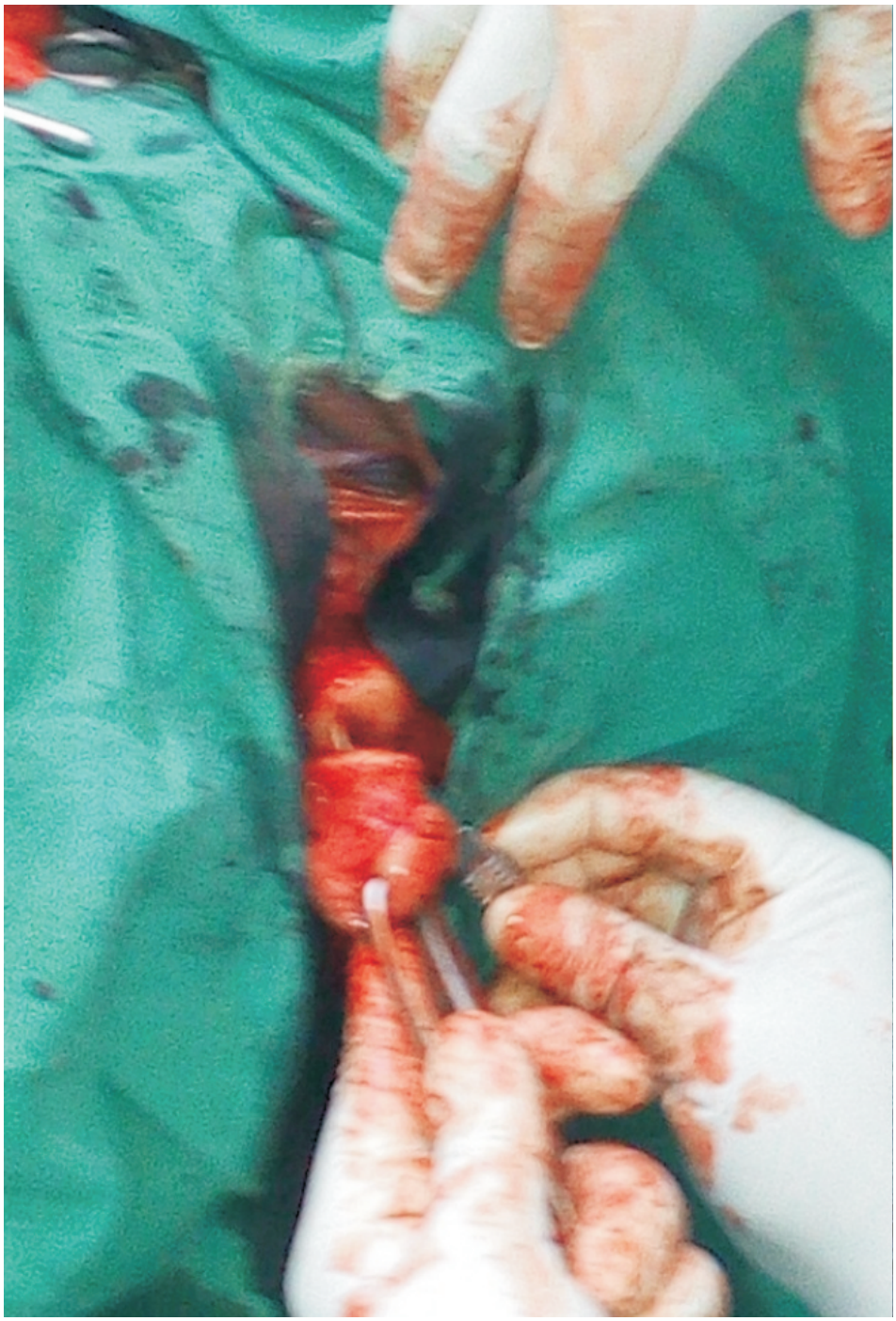

Figure 2: Amputation of the cervix after ligation of the laterally placed cervical arteries

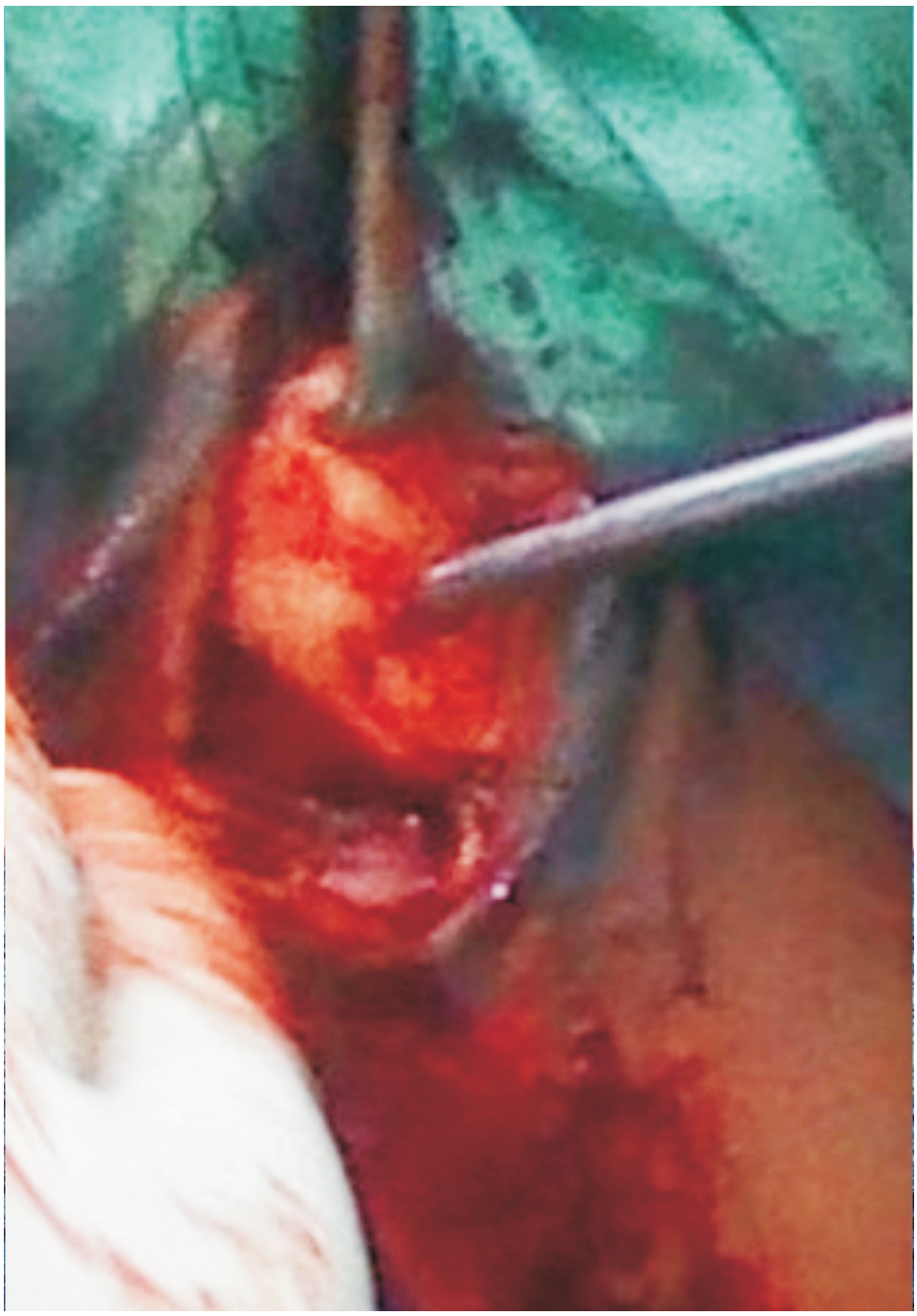

Figure 3: Insertion of a Hegar's Cervical Dilator to protect the cervical canal before placement of the Sturmdorf suture

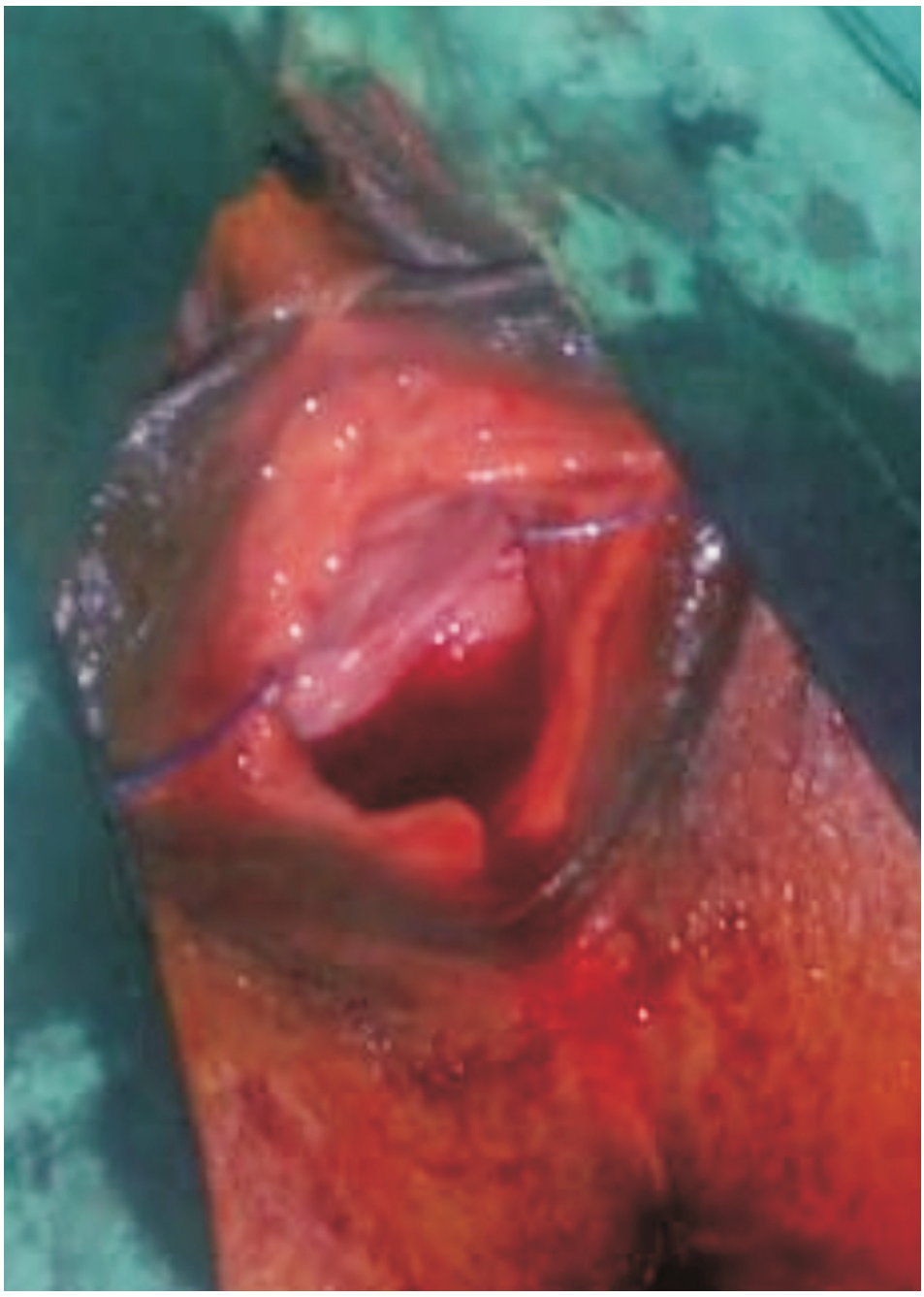

Figure 4: Showing the introitus and the vagina after the Manchester procedure

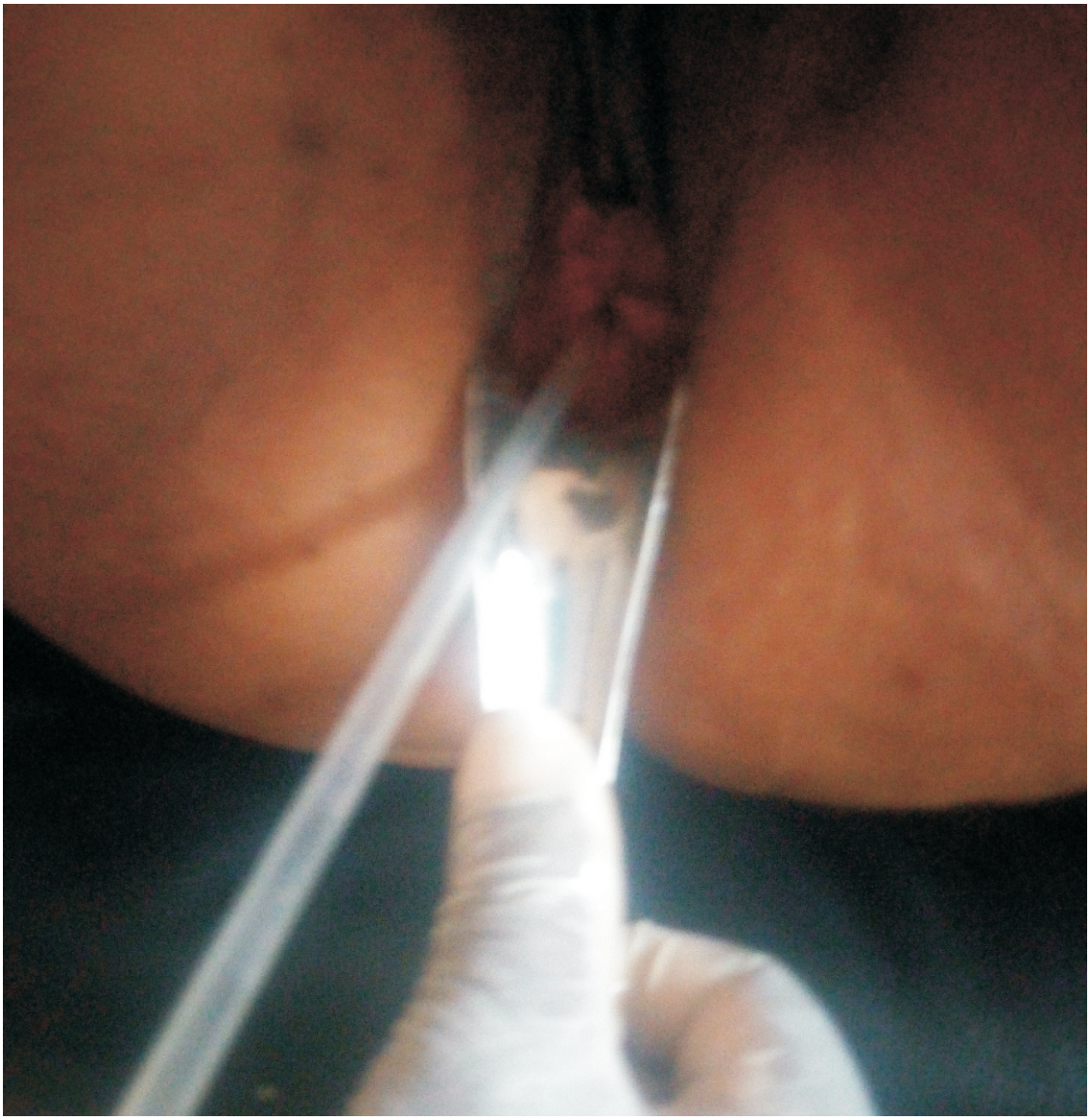

Figure 5: Showing patency of the cervix before discharge of patient from hospital on the 3rd day

Discussion

Utero-Vaginal Prolapse (UVP) is a frequently diagnosed health problem in women which negatively affects the quality of life, and 40% of parous women have at least stage 2 UVP.[8] Currently, three types of vaginal operations for uterine descent are performed most frequently; vaginal hysterectomy, Manchester operation and sacro-spinous hysteropexy, all combined with colporrhaphy when indicated.[6]

Vaginal hysterectomy has long been the standard approach for the management of uterine prolapse, with the ?rst successful planned case being credited to Langenback in 1813.[9,10] It remains

a safe and readily available surgical solution to uterine prolapse. Various techniques are described for reducing the risk of subsequent vaginal prolapse. The McCall culdoplasty (which involves approximating the uterosacral ligaments so as to obliterate the peritoneum of the posterior cul-de-sac as high as possible)[9,10] and suturing the cardinal and uterosacral ligaments to the vaginal cuff are two methods that are commonly employed for this purpose.[9,11] Also, vaginal hysterectomy will eliminate the possibility of uterine or cervical pathologies, because there have been incidences of unexpected pathology being detected at histological examination of the removed uterus.[12]

However, in many situations there is need for the preservation of the uterus. The most obvious indication is fertility preservation in women who are yet to start or yet to complete childbearing.[13] This was the case with our patients where 3 were nulliparous and 2 were primiparous. In this situation, uterine preservation becomes very crucial. Uterine preservation following prolapse is a concept that has been pursued for quite some time and more recently the peri-cervical fascia has been described as the cornerstone of pelvic reconstruction.[1,14] As women are delaying childbearing into later years, techniques for the preservation of the uterus become even more critical.

Sacrospinous hysteropexy and Manchester repair are uterus preserving techniques in which the uterus is attached to different pelvic ligaments (the sacrospinous ligament for hysteropexy and the uterosacral/transverse cervical ligaments for the Manchester repair.[8] In the five cases under review we opted for Manchester repair because of its advantage over sacrospinous hysteropexy of amputation of the cervix in elongated cervices[8] (which was the case with all of our five patients). In situations where the cervix is elongated, amputating it during Manchester repair will reduce the cervix to a normal length and thus preventing a false uterine descent and a more capacious vagina. The disadvantage of the amputation of the cervix is the possibility of excessive bleeding, cervical insufficiency during pregnancy and cervical atresia which were not the case with our patients probably because of the precaution to leave an appreciable length of the cervix during amputation and the use of the Sturmdorf procedure for the repair of the cervix.

The average age of our patients was 27.6 years with a range of 23 to 32 year, which was much lower than the average age at which UVP normally occurs.[2] Again, only two of these women had gone through labour and delivery with no complication which created difficulty in identifying the cause of the prolapse. All the patients were young and desirous of future or further reproduction which justified our choice of Manchester repair which is a fertility sparing procedure.

The average duration of our procedures was short and the blood loss was less when compared with another study.[1] Generally, many studies have shown that there are no significant differences in complication rates between the Manchester repair and the more commonly performed vagina hysterectomy, however, surgery time and total blood loss are typically less during the Manchester repair,[1,15] thus suggesting that the Manchester repair is a safe procedure. This was clearly shown in our experiences with the Manchester repair where there were no intra-operative and post-operative complications. With these results, one wonders why Manchester repair should not be the gold standard for UVP especially in young patients in the reproductive age group. This may be due to reported recurrence of prolapse in the first few months[1,16] and the subsequent drop in fertility to 21-33%[1,17] and pregnancy wastage of up to 50%.[1,18] We however, are of the opinion that in careful and experienced hands, these complications may not arise as shown in our experience with these five cases. Further studies may need to be done with larger sample sizes to support or refute our findings.

Though Manchester repair seems to be very effective, it is still an invasive procedure. It is therefore fair to say that conservative laparoscopic suspension surgery or use of a sling operation is probably most useful for young women with prolapse who wish to retain their uteri as these

techniques are less invasive.[1] Manchester repair will in such cases be reserved for those patients who experience recurrent uterine prolapse or those with associated cervical elongation following a surgical suspension procedure[1,12] We could not use these non-invasive methods because of lack of necessary expertise and the fact that all our patients had elongated cervices. Finally, vaginal hysterectomy with vaginal wall repair (if necessary) will be most appropriate for those women who do not desire future fertility.[1,12]

Conclusion

With the findings in this study of satisfaction to the patients, with no morbidity or complications, Manchester procedure is certainly worth considering as a good option for UVP especially for those women with elongated cervices who wish to continue their reproductive careers.

References

1. Rouzi AA, Salily NN, Shobkshi AS, Abduljabar HS. Manchester Repair: an Alternative to hysterectomy. Saudi Med J 2009;30(11):1473-1475.
2. Rigdgeway BM. Prolapse equal hysterectomy? The role of uterine conservation in women with utero-vaginal prolapse. Am J Obstet Gynecol 2015;213(6):802-8.
3. Maher C, Feiner B, Baessler K, Glazener C. Surgical management of pelvic organ prolapse in women: the updated summary version Cochrane review. Int Urogynecol J 2011;22:1445-57.
4. Jeffens H, Jackson SR, Price N. Management of uterine prolapse: is hysterectomy necessary? Obstet Gynecol 2016;18:17-23.
5. Latip NA, Py N, Jaili S, Nordin NM. Manchester-Fothergill procedure for the treatment of recurrent procidentia in young nulliparous woman: a case report.Med J Malaysia 2018;73(1):41-43.
6. Skadas CC, Golstein DP, Marc R, Laufer MR. the Manchester-Fothergill procedure as a fertility sparing alternative for POP in young women. J Pediatric Aldolesc Gynecol 2006;19:89-93.
7. Ayan S, Esin S, Guven S, Salman C Ozyuncu O. The Manchester operation for uterine prolapse. Int J Gynecol Obstet 2006;92(3):22833.
8. Schulten SFM, Enklaar RA, Kluivers KB, van Leijse SAL, vad der Weid MCJ, Adong EMM et al. Evaluation of two vaginal, uterus sparing operations for pelvic organ prolapse: modified Manchester operation (MM) and sacrospinous hysteropexy (SSH), a study protocol for a multicentre randomized noninferiority trial (the SAM study). BMC Women's Health 2019;19:49
9. Jefferis H, Jackson SR, Price N. Management of uterine prolapse: is hysterectomy necessary? The Obstetrician & Gynaecologist 2016;18:1723
10. Cruikshank SH, Kovac SR. Randomized comparison of three surgical methods used at the time of vaginal hysterectomy to prevent posterior enterocele. Am J Obstet Gynecol 1999;180:85965.
11. Cruikshank SH. Preventing post hysterectomy vaginal vault prolapse and enterocele during vaginal hysterectomy. Am J Obstet Gynecol 1987;155:143340
12. Frick AC, Walters MD, Larkin KS, Barber MD. Risk of unanticipated abnormal gynecologic pathology at the time of hysterectomy for uterovaginal prolapse. Am J Obstet Gynecol 2010;202:507.e1-507.e4
13. Tolstrup CK, Husby KR, Lose G, Kopp TI, Viborg PH, Kesmodel US, Klarskov N. The Manchester-fothergill procedure versus vaginal hysterectomy with uterosacral ligament suspension: a matched historical cohort study. Int Urogynecol J. 2018;29(3):43140.
14. Rose JW. Apical vault repair, the cornerstone of pelvic vault reconstruction. Int Urogynecol J 1997;8:146-152
15. Tolstrup CK, Lose G, Klarskov N. Manchester Procedure verses vaginal hysterectomy in the treatment of uterine prolapse: a review. Int Urogynecol J 2017;28(1):33-40
16. Williams BFP. Surgical treatment in uterine prolapse in young women. Am J Obstet Gynecol 1966;95:967-971
17. Fisher J. the effect of the amputation of the cervix uteri upon subsequent parturition. Am J Obstet Gynecol 1951;62:644-648.
18. O'Leary JA, O'Leary JL. The extended Manchester operation. Am J Obstet Gynecol 1970;107:546-550.