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Original Research Paper

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TOTAL LAPAROSCOPIC HYSTERECTOMY FOR FEMALE TO MALE GENDER RE-ASSIGNMENT

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ABSTRACT

Background: Total laparoscopic hysterectomy with bilateral salpingoopherectomy (TLH with BSO) is performed in cases of gender dysphoria for female to male gender re- assignment in trans- men. There are few unique challenges in these cases as compared to laparoscopic hysterectomy for other gynaecological conditions in cis-women. **Material & methods:** We performed 252 cases of TLH with BSO in the period of 5 years (2015-2020). All the cases were trans-men who wanted female to male gender affirmation surgery. Before surgery, evaluation by 2 psychiatrists was done to confirm gender dysphoria. All surgeries were done with written informed consent after variable duration of cross hormone therapy. **Results:** Delayed tissue healing and secondary haemorrhage from vault were more as compared to TLH in normal women. As all patients were nulliparas and mostly virgins having narrow vagina, there was technical difficulty in manipulation. Vaginal vault closed more exterior in these patients. Bilateral oophorectomy necessitates counselling for life-long testosterone therapy. **Conclusion:** TLH in trans-men poses unique surgical and social challenges. The acceptance for surgery is high. 90 % of these patients do not want further genetic reconstruction.

KEYWORDS : Gender reassignment, Trans-men, TLH with BSO, Gender dysphoria

INTRODUCTION:

Gender dysphoria is a mental condition in which discrepancy between one's gender identity and his/her natal gender (the sex assigned at birth) causes significant distress or discomfort.[1] Gender identity means a person's innate sense of being male, female or somewhere in between. The World Professional Association for Trans gender Health (WPATH) claims that the prevalence of trans gender men is less than that of trans gender women.[2] Gender affirmation surgery is the final step in the treatment process of gender dysphoria.

In female to male transsexuals, surgery is performed in several stages. The first stage is mastectomy and chest reconstruction followed by hysterectomy with bilateral ovariectomy. This may be followed by vaginectomy, phalloplasty, scrotoplasty, voice change surgeries etc.[3] The criteria for undergoing irreversible genital surgeries in transgender patients has been provided by WPATH-[4]

- Well documented persistent gender dysphoria
- Living in desired gender role for at least one year
- Cross hormone therapy for at least one year
- Evaluation by two mental health professionals
- Age of majority (varies country wise)
- Medical and mental comorbidities, if present, should be well controlled.

According to WPATH, the gender affirming/ confirming surgeries are not "cosmetic" or "for mere convenience of the patient" or "optional" but are medically necessary.[5] In some cases, the surgery is the only effective treatment for the condition and in other cases, genital surgery is essential and life-saving. The benefit from removal of ovaries are :

- Good patient satisfaction for the goal of congruence with gender identity is achieved better as it helps in further masculinization.
- Elimination of the concern of future adnexal pathology
- Eliminates the need of routine gynaecological care as these patients are reluctant to visit the gynaecologist as males.

There are few unique challenges in performing TLH in these cases as compared to laparoscopic hysterectomy for other gynaecological conditions in cis-women.

MATERIAL AND METHODS:

We performed 252 of TLH with bilateral ovariectomy from march 2015 to march 2020 at Zenith Plastic Surgery Centre, Indore (India). All these patients wanted gender assignment surgery (female to male) for variable indications. All patients underwent detailed psychological evaluation by two psychiatrists. Testosterone therapy was started under care of endocrinologist. Written informed consent was obtained from all patients. All surgeries were performed at least one year after starting hormone therapy. All patients were admitted a day prior to surgery and discharged 1-2 days post operatively. WPATH criteria of selection of patients was strictly followed.

Observations:

The mean age of our patients was 28 (18-42 years). The mean BMI was 22.38 (18.2-32.6). The mean weight of uterus and adnexa was 82.16(52-168 grams). All patients were nulliparas. 232 patients (92%) underwent both mastectomy as well as TLH with BSO. 20 patients (8%) underwent only TLH with BSO as mastectomy was already done. 20 patients (8%) underwent phalloplasty at a later stage. Vaginectomy was not performed with TLH and was combined with phalloplasty at a later stage.

Table-1 distribution of parameters

Serial no	Parameter	Observation
1	Parity	Nullipara (100%)
2	Age (mean)	28 years
3	BMI (mean)	22.38
4	Wt of uterus & adnexa	82.16 grams
5	Operating time (average)	80 mins
6	Blood loss (average)	55 ml

Histological findings included atrophic cervix, weakly proliferative endometrium in 202 patients (80%),benign follicular cysts in 10 patients (3.9%), intramural fibroids in 7 patients (2.7%) and adenomyosis in 5 patients ((1.9%). Intra-operative findings included mild endometriosis in 18 patients (7.1%) and features of PID in 12 patients (4.7%).

Table-2 pattern of histology

Serial no	Histology findings	Observation
1	Atrophic cervix and endometrium	202 (80%)
2	Benign follicular cysts	10 (3.9%)

3	Intramural fibroids	7 (2.7%)
4	Adenomyosis	5 (1.9%)
5	Endometriosis	18 (7.1%)
6	PID	12 (4.7%)

In our study, 23 patients had secondary haemorrhage from vault on 9th – 11th post-operative day. It was managed conservatively by broad spectrum antibiotics and haemostatic agents. Few patients needed vaginal oestrogen cream to promote healing. 5 patients developed urinary tract infection which was again treated with antibiotics as per the culture & sensitivity report. 1 patient had a cervical fibroid and needed blood transfusion post-operatively. The same patient needed ureteric stenting which was removed after 3 weeks. 5 patients had vaginal lacerations due to vaginal manipulator which were sutured in the same sitting.

Table- 3 complications

Serial no	Complications	Observation
1	Secondary haemorrhage	23 (9.13%)
2	UTI	5 (1.98%)
3	Vaginal lacerations	1 (0.39%)
4	Ureteric stenting and blood transfusion	1 (0.39%)

The complication rate of TLH with BSO in trans-gender patients was 12.5 % and all were minor complications.

DISCUSSION:

Total laparoscopic hysterectomy offers appropriate surgical outcomes for those patients identifying themselves as trans-sexual. All the patients, in our study, were young and nulliparous. Comparable studies by O' Hanlan et al[6] and Obedin Maliver[7] et al have also reported younger age and low parity among trans men when compared to cis- women. Our study revealed that almost all patients opted for concurrent adnexal surgery. In addition to aligning the reproductive organs with gender identity, it is also recommended to remove the tubes and ovaries with simultaneous testosterone therapy. The size of the uterus is comparatively less due to testosterone therapy. Various studies have compared the laparoscopic route of surgery with the vaginal route. Although a safe option, but vaginal hysterectomy in such patients will be challenging as penetrative intercourse has usually not happened in such patients and testosterone therapy leads to vaginal atrophy.[8]

As all patients were nulliparous and most were virgins, uterine manipulation from below was difficult. Some patients had vaginal lacerations and needed haemostatic suturing. Few patients were offered oestrogen vaginal cream to promote healing. Similar complications were faced by Costa et al in their study.[9] We also encountered more port site bleeding in our study, as compared to TLH in cis- women.

Risks associated with testosterone therapy includes polycythemia, weight gain, sleep apnoea, hypertension, hyper-lipidemia and type 2 diabetes mellitus.[10] These patients are considered high-risk due to possibility of theses medical conditions and hence need thorough pre-operative workup and intensive post-operative care. Intra-operatively, the vaginal cuff closure has to be done more exteriorly so that vaginal orifice is smaller as these patients will undergo colpectomy, colpocleisis and phalloplasty in the second stage. Hence, dissection of vagina distally needs expertise in laparoscopy to avoid injury to bladder, rectum and the ureters. As ovaries were removed in all cases, the patients have to be counselled for life-long testosterone therapy as they would be at risk for osteoporosis, vasomotor symptoms and adverse cardiovascular events. The 2009 Endocrine safety practice guidelines for trans-men recommend bone mineral density screening for such patients.[11]

Removal of ovaries eliminate the possibility of having a biological offspring. Referral to Reproductive endocrinology and infertility practice, familiar and friendly to the needs of trans gender patients is preferred, ideally, before initiation of testosterone therapy, if oocyte retrieval and embryo cryopreservation is being considered.[12] Unfortunately, in India, most of the IVF centres are not dealing with such patients due to lack of legal knowledge. Testosterone therapy, if started, has to be interrupted for ovarian stimulation.

Most of the patients had a smooth surgical experience. There were no major surgical complications in our study.

Last but not the least, the hospital staff and doctors have to be educated on the basics of gender dysphoria and the gender affirming procedures as these patients suffer significant psychological distress already that can be aggravated by an insensitive encounter by an untrained staff. Although gender dysphoria is slowly getting recognition in the society, the hospitals involved in the physical treatment of such patients are still insufficient.

CONCLUSION:

Total laparoscopic hysterectomy in trans gender men poses unique surgical and social challenges. In our retrospective study, we found the laparoscopic route easier with more patient compliance and less complication rate. Patient satisfaction after surgery has been excellent. Many patients do not want further genital reconstruction after mastectomy and TLH. The quality of care provided before, during and after the sex reassignment surgery has a significant impact on patient outcome.

REFERENCES:

1. *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR)*. American Psychiatric Association. 2022
2. Cohen-Kettenis, P. T., Owen, A., Kaijser, V. G., Bradley, S. J., & Zucker, K. J. (2003). Demographic characteristics, social competence, and behavior problems in children with gender identity disorder: A cross-national, crossclinic comparative analysis. Journal of Abnormal Child Psychology, 31(1), 41-53. doi:10.1023/A:1021769215342
3. Monstrey SJ, Ceulemans P, Hoebeke P. Sex Reassignment Surgery in the Female-to-Male Transsexual. Semin Plast Surg. 2011 Aug;25(3):229-44. doi: 10.1055/s-0031-1281493. PMID: 22851915; PMCID: PMC3312187.
4. Nokoff NJ. Medical Interventions for Transgender Youth. [Updated 2022 Jan 19]. In: Feingold KR, Anawalt B, Blackman MR, et al., editors. Endotext [Internet]. South Dartmouth (MA): MDText.com, Inc.; 2000-.
5. Ettner R, Monstrey S, Coleman E (eds.). (2016). *Principles of Transgender Medicine and Surgery: Second Edition*. New York: Haworth Press.
6. O'Hanlan, Katherine & Dibble, Suzanne & Garnier, Anne-Caroline & Reuland, Mirjam. (2007). Total Laparoscopic Hysterectomy: Technique and Complications of 830 Cases. JSLS : Journal of the Society of Laparoendoscopic Surgeons/Society of Laparoendoscopic Surgeons. 11. 4553.
7. Obedin-Maliver, Juno & Light, Alexis & Haan, Gene & Jackson, Rebecca. (2017). Feasibility of Vaginal Hysterectomy for Female-to-Male Transgender Men. Obstetrics and gynecology. 129. 10.1097/AOG.0000000000001866.
8. Diaz, D.A. & Marfori, C.Q.. (2022). 8402 Two-Port Total Laparoscopic Hysterectomy and Excision of Simple Endometriosis in a Transgender Male Patient.. Journal of Minimally Invasive Gynecology. 29. S124. 10.1016/j.jmig.2022.09.403.
9. Gomes da Costa A., Valentim-Lourenço A., Santos-Ribeiro S., et al. Laparoscopic vaginal-assisted hysterectomy with complete vaginectomy for female-to-male genital reassignment surgery. 2016;23(3):404–409. doi: 10.1016/j.jmig.2015.12.014.
10. Korpaisarn S, Chiewchalermsri D, Arunakul J, Chinthakanan O, Poomthavorn P, Sriphrapradang C. Effects of testosterone treatment on transgender males: A single-institution study. SAGE Open Med. 2021 Oct 10;9: 2050 3121 211051546. doi: 10.1177/20503121211051546. PMID: 34659767; PMCID: PMC 8511909.
11. LeBoff, M., Greenspan, S., Insogna, K. *et al.* The clinician's guide to prevention and treatment of osteoporosis. *Osteoporos Int* 33, 2049–2102 (2022).
12. Choi JY, Kim TJ. Fertility Preservation and Reproductive Potential in Transgender and Gender Fluid Population. Biomedicines. 2022 Sep 14;10(9):2279. doi: 10.3390/biomedicines10092279. PMID: 36140377; PMCID: PMC9496568.