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A study on surgical morbidities among patients who underwent laparoscopic hysterectomy versus abdominal hysterectomy in a tertiary care centre, Tamilnadu

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Abstract

Background: After the introduction of laparoscopic hysterectomy by Reich in 1989, it is being followed worldwide. Classically the trans abdominal hysterectomy is also being done in many institutions till date. The aim of the study is to compare the intraoperative and postoperative complications in abdominal and laparoscopic hysterectomies, in the Department of Obstetrics and Gynaecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam.

Methodology: The study population included the post hysterectomy patients attending the Gynaecology OP and the post operative patients admitted in Gynaecology ward, in the Department of Obstetrics and Gynaecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District. Based on inclusion and exclusion criteria, the study participants were recruited during the study period. The finally obtained sample size is 100 (50 in each group).The data collected will be entered in Excel sheet and analysis will be done by SPSS 23.P value <0.05 is considered as statistically significant.

Results: The mean age of the study participants was found to be 46.3±8.6 in TAH (Total Abdominal Hysterectomy) group and 46.4±6.6 in TLH (Total Laparoscopic Hysterectomy) group. The mean Body mass index and Parity were also found to be nearly equal

in both the groups .The most common indication for the surgery was found to be Fibroid uterus[TAH-25(50%),TLH-34(68%)] followed by Adenomyosis [TAH-12(24%),TLH-10(20%)].The mean duration of surgery was found to be longer in TLH group compared to TAH group and the difference was found to be statistically significant. The mean hospital stay and the blood loss were found to be lesser in TLH group compared to TAH group and the difference was found to be statistically significant.

Conclusion: My study concluded stating that Total Laparoscopic Hysterectomy is an emerging alternative to Total Abdominal Hysterectomy. Though TLH has longer operating time, it is more beneficial than the traditional TAH in view of reduced intraoperative blood loss and postoperative hospital stay.

Keywords: Endometriosis, Adenomyosis, Hysterectomy, Leiomyoma, Fistula, Haematuria.

Introduction

The second most commonly performed major surgical procedure in women is Hysterectomy which is next to Caesarean all over the world. In other countries, the hysterectomy rate was higher ranging from 10%-20% ,whereas in India the frequency ranges from 4-6%.This difference may be due to high tolerance and threshold of Indian Women and low level of medicalization (1,2,3).When Medical treatment or less invasive methods have failed, Hysterectomy is indicated. Surgical option always has physical, emotional, social and economic complications (4).

Hysterectomy is a surgical challenge regardless of the routine like open abdominal or vaginal or laparoscopic. While considering the lesser invasions, vaginal route is still the preferred route. But more flexibility is provided to surgeons by abdominal route. Since 1989, when Laparoscopic hysterectomy was introduced by Reich, it is widely accepted. This is because of the lower post op morbidity, lesser hospital stay, improved quality of life and less blood loss compared to laparotomy (5).The main intension of laparoscopy is to convert hysterectomy into a minimally invasive procedure.

Laparoscopic surgery has gained an over edge than vaginal and abdominal routes and has expanded indications like large fibroids, endometriosis and pelvic prolapse which are reserved for open surgeries (6).Thus it gives a good postoperative quality of life and satisfaction similar to conservative management (7).The variability in the technical difficulties depends on factors like uterine size, pelvic adhesive disease, endometriosis and location of leiomyoma. The aim of the study is to compare the intraoperative and postoperative complications in abdominal hysterectomy and laparoscopic hysterectomies, in the Department of Obstetrics and Gynaecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam.

Material and Method

Type of study: Retrospective study

Period of study: 1 year

Place of study: Department of Obstetrics and Gynaecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamilnadu, India.

Study Population

The study population includes all the women who underwent total laparoscopic hysterectomy (TLH) and total abdominal hysterectomy (TAH) in the Department of Obstetrics and Gynecology, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamilnadu, India.

Exclusion Criteria

- Hysterectomies performed through vaginal routes
- Hysterectomies performed secondary to obstetrics
- Hysterectomies performed for malignancies.

Sample Size

Based on inclusion and exclusion criteria, the final sample size recruited during the study period was 100.The study population was divided into two groups. Group 1 consists of patients who underwent Total Laparoscopic Hysterectomy (TLH) and Group 2 consists of patients who underwent Total Abdominal Hysterectomy (TAH).

Data Collection

The baseline characteristics of the study participants like age, body mass index, size of uterus, indications for surgery, intraoperative complications, injury to adjacent organs and postoperative complications like fever, haematuria, surgical site infections, fistula formation, duration of hospital stay and readmission rates were collected from the registers or records.

Operational Definitions

- Duration of operation was calculated from skin incision (in case of TAH) and fromVeress needle insertion (in case of TLH) to the last suture of the abdominal wound.
- Duration of hospital stay: It was calculated from the day of surgery to the day of discharge.
- Blood loss was calculated from the pad soakage and aspiration.

Statistical Analysis

The obtained data was entered in the MS Excel Windows 10.Statistical analysis was done with the help of SPSS 23.Continuous data was expressed in terms of Mean and Standard deviation. Categorical data was expressed in terms of Numbers and percentages. Pearson correlation was done to find the association between the continuous variables. Test of association for Categorical data was Chi square test and for Continuous data was t test and Anova test.p value <0.05 is considered as statistically significant.

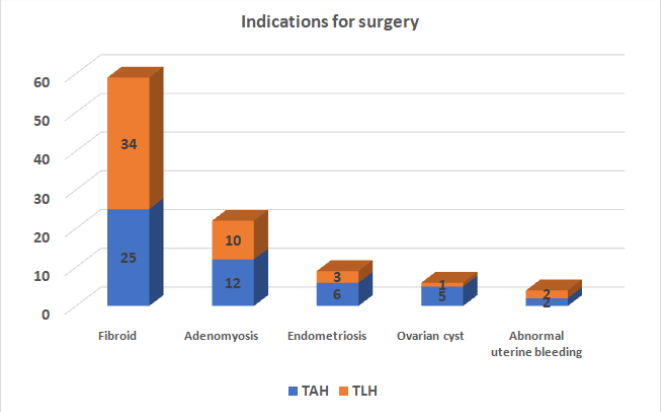
Results

Table 1: Demographic profile of the study participants

Variables	TAH (N=50)	TLH (N=50)	P value
Mean age	46.3±8.6	46.4±6.6	0.94
BMI	26.7±4.6	26±3.7	0.4
Parity	1.58±1.1	1.56±0.6	0.90
Caesarean delivery	0.61±0.8	0.44±0.7	0.26

The mean age of the study participants was found to be 46.3±8.6 in TAH group and 46.4±6.6 in TLH group. The mean Body mass index and Parity were also found to be nearly equal in both the groups .There was a difference between the groups in history of previous caesarean deliveries but the difference was found to be not statistically significant.

Figure 1: Indications for Surgery



The most common indication for the surgery was found to be Fibroid Uterus [TAH-25(50%), TLH-34(68%)] followed by Adenomyosis [TAH-12(24%), TLH-10(20%)] and Endometriosis. In TAH, the fourth

common indication was found to be ovarian cyst followed by Abnormal Uterine bleeding whereas in TLH, it was Abnormal Uterine Bleeding followed by ovarian cyst.

Table 2: Intraoperative findings and duration of hospital stay

Variables	TAH (N=50)	TLH (N=50)	P value
Duration of the surgery (min)	103.6±38.7	123±38.6	0.01*
Uterine size (cm)	13.24±5.3	11.14±2.8	0.02*
Blood loss (ml)	6.4±2.1	4.5±1.1	<0.001*
Hospital stay(hours)	242±208	162±147	0.01*

The mean duration of surgery was found to be longer in TLH group compared to TAH group and the difference was found to be statistically significant. The mean hospital stay and the blood loss was found to be lesser in TLH group compared to TAH group and the difference was found to be statistically significant. The mean uterine size was found to be less in the TLH group compared to TAH group. The differences between the groups were also found to be statistically significant.

Table 3: Complications observed in both the groups:

Variables	TAH (N=50)	TLH (N=50)	P value
Vault trauma	3(6.25%)	1(2%)	0.15
Fever	0(0%)	2(4%)	0.07
Bowel injury	0(0%)	1(2%)	0.15
Bladder injury	0(0%)	1(2%)	0.15
Ureteric injury	0(0%)	1(2%)	0.15
Wound infection	14(28.12%)	0(0%)	0.02
Converted to Laparotomy	0(0%)	1(2%)	0.15
Repeat injury	2(4%)	3(6%)	0.32

Complications were more common in TAH group compared to TLH group. Wound infection 14(28.12%) was the most common complication observed in TAH group and it was found to be statistically significant. Repeat injury was most common in TLH group 3(6%).Fever 2(4%), Bowel injury 1(2%), Bladder injury 1(2%) and Ureteric injury 1(2%) were reported in TLH group.1 (2%) of being converted to laparotomy was also reported in TLH group. Vault trauma was 3(6.25%) in TAH group. All the other complications noted were not found to be statistically significant.

Discussion

Surgical approaches determine the patients' postoperative surgical morbidity, particularly among patients with the abnormal uterine bleeding (8,9).In my study, the intra and post operative outcomes were compared between both TAH and TLH groups. The mean age of the study participants in my study was found to be 46.3±8.6 in TAH group and 46.4±6.6 in TLH group. But the difference was not found to be statistically significant. Similar results were also seen in Kanmani M et al (10) where the mean age of TAH was 46.5 ±8.9 and the mean age of TVH was found to be 46.9±6.9.The mean Body mass index and Parity were also found to be nearly equal in both the groups. Similar results were also seen in the study done by Kanmani M et al.

In our study the most common indication for the surgery was found to be Fibroid (TAH-25(50%),TLH-34(68%) followed by Adenomyosis (TAH-12(24%),TLH-10(20%).This results were in par with the Kanmani M et al study .The mean duration of surgery was found to be

longer in TLH group compared to TAH group and the difference was found to be statistically significant. The mean hospital stay and the blood loss were found to be lesser in TLH group compared to TAH group and the difference was found to be statistically significant. The mean uterine size was found to be less in the TLH group compared to TAH group. The difference between the groups was also found to be statistically significant. Similar results were also seen in Kanmani M et al study.Jahan et al (11) in his study stated that less complications rate, reduced blood loss, less post operative pain and shorter hospital stay in TLH group compared to TAH group. Nanavanti et al(12) also showed reduced blood loss and reduced duration of surgery in TLH group compared to TAH. Longer operating time was noted in TLH group in study done by Virupaksha et al (13).

In our study, one patient was reported to have bowel injury. Bowel injuries tend to occur in <1% of laparoscopic procedures and mostly due to less experienced surgeons(14).An international society for Gynecologic Endoscopy Survey found that bowel injury was less frequent by the experienced surgeons, but the risk of injury during the abdominal access was unrelated to experience(15).

Thus laparoscopic skills knowledge expansion by the surgeons and the increase in the number of the type of complex laparoscopic procedures offered to patients by them over the conventional surgeries, they should also be aware of the potential complications which will arise during and after the surgeries. Thus meticulous surgical training in the techniques and appropriate selection and management of complications both intraoperatively and postoperatively should be emphasized.

Conclusion

Our study concludes stating that Laparoscopic hysterectomy is an emerging alternative to abdominal hysterectomy. Though TLH has longer operating time it is more beneficial than the traditional TAH, which reduces the intraoperative blood loss and postoperative hospital stay.

Limitations

In our study we used a smaller sample size. The second limitation is that the data collected was through the medical records. So the confounding factors cannot be excluded in this study.

Contributions: All authors contributed to this journal

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References

1. Harry R, Lisa R. Laparoscopic Hysterectomy in current gynecological practice. Gynecol Perinatal Prac 2003;3:32-40
2. Bhasin SK, Roy R, Agrawal S. An epidemiological study of major surgical procedures in an urban population of East Delhi. Indian J Surg .2011:73(2).131-135
3. KluiversKB, Johnson NR,Chien P. Comparison of laparoscopic and abdominal hysterectomy in terms of quality of life:a systematic review.European journal of Obstetrics and Gynecology and Reproductive Biology .2008;136(1):3-8
4. Coulter A,BradlowJ,AgassM.Outcomes of referrals to gynaecology outpatient clinics for menstrual problems: an audit of general practice records.Br J Obstet Gynaecol.1991.98(8):789-796

5. Walsh CA,WalshSR, Tang TY, slack M. Total abdominal hysterectomy versus total laparascopic hysterectomy for benign disease: a meta-analysis. Eur J Obstet GynecolReprod Biol.2009;144(1):3-7
6. Ottosen C, Lingman G,OttosenL.Three methods for hysterectomy: A randomized, prospective study of short term outcome.BJOG.2000;107:1380-5
7. Vitale SG, Riemma G,Mikus M, Carugno J, Torella M, Reyes-Munoz E et al. Quality of life, anxiety and depression in women treated with hysterescopic endometrial resection or ablation for heavy menstrual bleeding: Systemic review and meta-analysis of randomized controlled trials. Medicina (Kaunas)2022.58:1664
8. Simicevic M, Juras J, Lovric Grsic H, Mikus M, Planinic P, Coric M. Comparison of laparoscopic and laparatomic approach in lymphadenectomy in women with ggynaecological cancer. J Obstet Gynaecol 2021.41:329-30
9. Kanti V,VermaV, SinghM, VishwakarmaS, MittalN, Singh NP.A Comparative analysis of nondescent vaginal hysterectomy, laparoscopy-assisted vaginal hysterectomy and total laparoscopic hysterectomy for benign uterine diseases at a rural tertiary care center.Gynecol Minim Invasive Ther 2022;11:164-70
10. Kanmani M, Govindarajan M, Selvaraj V. Comparative study of surgical results between total abdominal hysterectomy and total laparoscopic hysterectomy in a tertiary hospital:a 2year retrospective study. Int J Reprod Contracept Obstet Gynecol.2018:7:1019-23.
11. Jahan S, Das TR, Mahmud N, Mondol SK, Habib SH, Saha S.A Comparative study among laparoscopically assisted vaginal hysterectomy, vaginal hysterectomy and abdominal hysterectomy: experience in a tertiary care hospital in Bangladesh .J Obstet Gynecol.2011;31(3):254-7
12. Nanavanti AM, Gokral SB.A Prospective randomized comparative study of vaginal, abdominal and laparoscopic hysterectomies. J Obstet Gynaecol India. 2016.66(1):389-94.
13. Ajjammanavar V, JayashreeS, Amrutha B. Total laparoscopic hysterectomy versus total abdominal hysterectomy: a retrospective study. J Evid Based Med Healthcare.2015.2(41):7019-25
14. Llarena NC, Shah AB, Milad MP. Bowel injury in gynecologic laparoscopy: A systematic review. Obstet Gynecol 2015;125:1407-17
15. BrosensI, Gordon A, Campo R, Gordts S. Bowel injury in gynecologic laparoscopy. J am Assoc Gynecol Laparosc 2003;10:9-13