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Indications and Prevalence of Hysterectomy for Benign Conditions at a Tertiary Care Hospital in Rural South India–A Descriptive Study

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ABSTRACT

This study aims to assess the indications and prevalence often various types of hysterectomy done for benign diseases. It was a retrospective descriptive study conducted at the Department of Obstetrics and Gynaecology in Saveetha Medical College and Hospital, Thandalam. Data about the hysterectomies done for benign conditions were obtained from January 2019 till December 2019 from the in-hospital medical registry. Demographics, presenting complaints, indications, history, type of hysterectomy and complications were analysed. Amongst the two hundred (200) cases of hysterectomy performed in the year 2019, total abdominal hysterectomy (69%) was the most standard type and Leiomyoma uterus (73.5%) being the most common indication. Bilateral Salphingo-Oophorectomy (55%) was done in most patients, along with hysterectomy. Due to the advent of safer surgical practices, the extent of complications have drastically reduced, excessive bleeding (13.5%) being the most common, surgical site infection (1.5%) and bladder injury (1.5%) were recorded. This study demonstrates that though the incidence of hysterectomy done for benign conditions is decreasing with increasing popularity to go for medical management, women in rural India are still opting for surgical management. This necessitates the need for studies to analyse the psychological aspect governing the acceptance of surgical management in preference to conservative management in these rural women.

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INTRODUCTION

Hysterectomy stands alone as the most common operation done by an obstetrician and gynaecologist following caesarean section (Lundholm *et al.*, 2009). With the advent of many non-invasive and minimally invasive techniques for the management of benign conditions of the uterus, there has been a decline in open hysterectomy (Learman, 2014). However, hysterectomy being definitive management for any condition affecting the uterus still is being favoured both by the woman and the clinician, especially in rural areas in India (Shekhar *et al.*, 2019).

In a study from Denmark, there has been an increase in favour of vaginal and laparoscopic hysterectomy during 35 years (Lykke *et al.*, 2013). In Poland, there was a change in trend towards less invasive techniques and subtotal hysterectomy compared to total abdominal hysterectomy in five years (Romanek-Piva *et al.*, 2016). However, leiomyoma has remained the leading factor leading to hys-

terectomy in most of the cases, but with an increasing trend towards an acceptance of other conservative options. The NFHS-4 survey listed the prevalence, indications and trends of hysterectomy in India for the first time (Desai *et al.*, 2015). From the numbers obtained, it was analysed that India could be the country with the maximum number of hysterectomies. Excessive bleeding was listed to be the most common indication with leiomyoma being the commonly implicated. The studies in rural India indicate that hysterectomy is higher in women with low socioeconomic status and low literacy rates. Though a change in trend has been noted in the world, it has not yet transferred into India, especially in rural areas. Nowadays, bilateral salpingo-oophorectomy has been avoided in younger women because of its future complications due to premature surgical menopause. But still, it is increasingly being performed in many regions in India.

Owing to a very few studies on the trends of hysterectomy in rural south India after NFHS-4, this study was performed to know the trend of hysterectomy along with complications in a rural tertiary care hospital to know the degree of utilisation of minimally invasive techniques in management.

MATERIALS AND METHODS

A retrospective descriptive study was carried out in the department of Obstetrics and Gynaecology in Saveetha Medical College and Hospital, Thandalam from January 2019 to December 2019. Necessary approval from the hospital management was obtained, and data about hysterectomies done for benign conditions were obtained from January 2019 till December 2019 from the in-hospital medical registry. Data such as demographics, age, presenting complaints, indications, type of hysterectomy, history and complications were recorded and entered into Microsoft Excel database. Statistical analysis was done using SPSS software.

RESULTS

Age of the patient

A total of 200 Hysterectomies were done in Saveetha Medical College and Hospital in the year 2019. The association of age in patients who underwent hysterectomy shows that majority of the patients belonged to the mid-age group of 40-50 years who account for the highest number 95 (47.5%). (Figure 1, Table 1).

Presenting Complaints

The most common presenting complaint was excessive bleeding 103 (51.5%) followed by pain abdomen 51(25.5%). A few patients presented with more than two presenting complaints (16%). (Table 2, Figure 2)

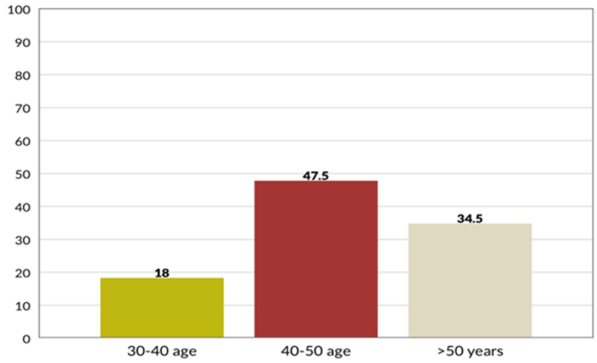

Figure 1: Represents the association of age with hysterectomy

Table 1: Represents the association of age in patients

Age	Total Cases(n)	Percentage (%)
30-40 years	36	18 %
40-50 years	95	47.5 %
>50 years	69	34.5 %

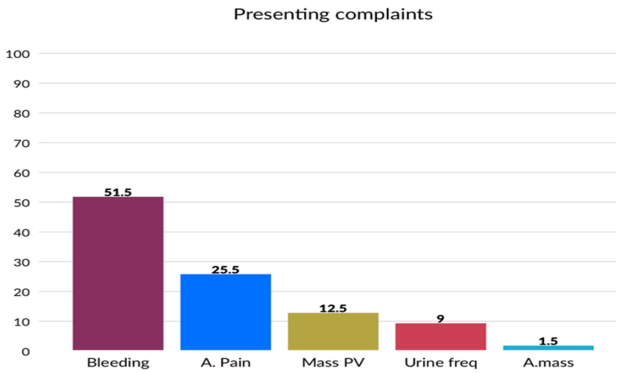

Figure 2: Represents the common presenting complaints

Table 2: Represents the frequency of presenting complaints

Presenting Complaints	Total Cases(n)	Percentage (%)
Excessive bleeding	103	51.5
Abdominal pain	51	25.5
Mass descending per vagina	25	12.5
Increased urinary frequency	18	9
Mass in abdomen	3	1.5

Indications for hysterectomy

The most typical indication which led to hysterectomy was Abnormal uterine bleeding 101 (50.5%). Leiomyoma 86 (43%) was the most common cause of AUB. Leiomyoma without AUB accounted for 30.5% cases. Thus, 147 cases of leiomyoma contributed to hysterectomies(73.5%) which was the maximum.

Benign Ovarian cyst was the least common indication (6.5%). (Tables 3 and 4, Figures 3 and 4)

Table 3: Represents the common indications of hysterectomy

Indications	Total Cases(n)	Percentage (%)
Abnormal Uterine Bleeding	101	50.5 %
Leiomyoma(without AUB)	61	30.5 %
Cervical Lesion	25	12.5%
Ovarian Cyst(benign)	13	6.5%

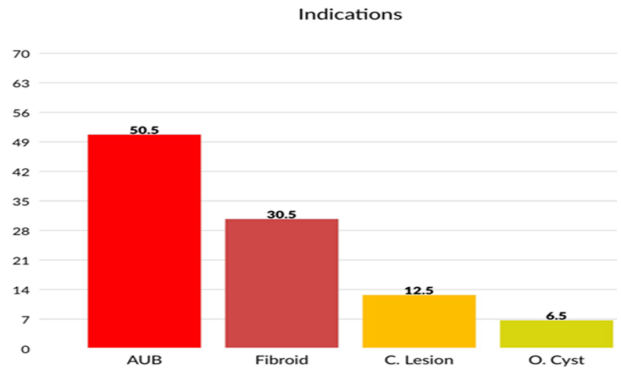

Figure 3: Represents the indications of Hysterectomies

Table 4: Represents the most common aetiology of abnormal uterine bleeding

Aetiology of Aub	Total Cases(n)	Percentage (%)
Leiomyoma	86	43 %
Adenomyosis	56	28 %
Endometrial	40	20 %
Polyp	18	9 %

Previous surgical history

Most of the patients were observed to have a history of Laparotomy 116 (58%) while the rest 84 (42%) had no history of previous surgeries. (Table 5, Figure 5)

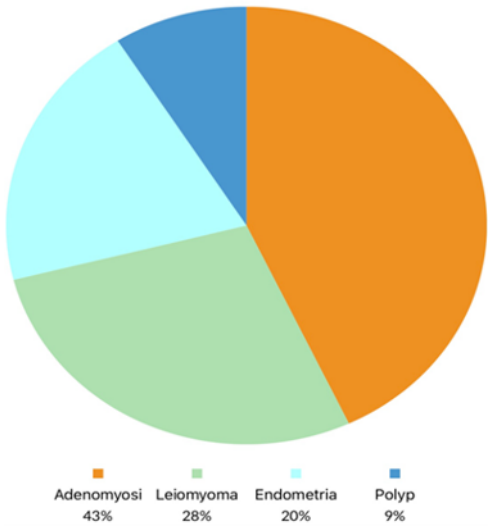

Figure 4: Common causes of AUB

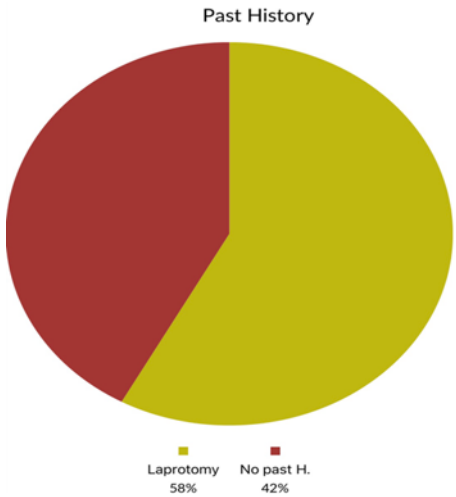

Figure 5: History of Patients who underwent a hysterectomy

Table 5: Represents the history of patients

Past History	Total Cases(n)	Percentage (%)
Laparotomy	116	58 %
No previous surgeries	84	42 %

Type of hysterectomy

Total abdominal hysterectomy was the most commonly performed with 138 (69%), followed by Vaginal Hysterectomy 42 (21%), Laparoscopic-assisted vaginal hysterectomy14 (7%) and total laparoscopic hysterectomy6 (3%). Most of the patients underwent Bilateral salpingo-oophorectomy 110 (55%). (Tables 6 and 7, Figures 6 and 7)

Complications

The intraoperative and postoperative complications

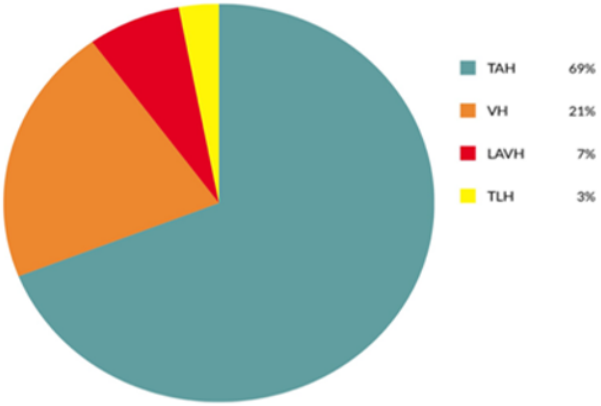

Figure 6: Represents the type of hysterectomy done

Table 6: Represents the type of hysterectomy done

Type of hysterectomy	Total Cases(n)	Percentage (%)
TAH	138	69 %
VH	42	42 %
LAVH	14	14 %
TLH	06	03 %

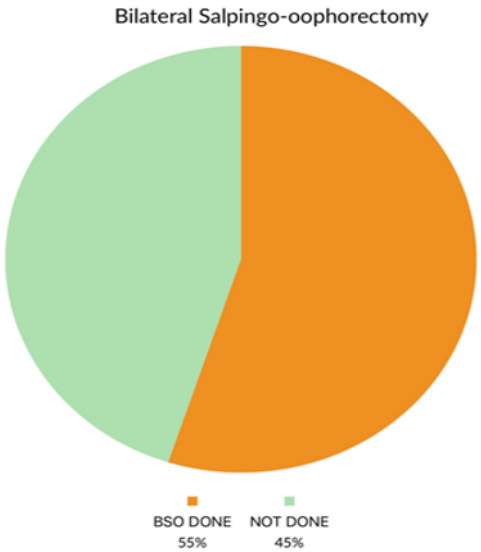

Figure 7: Choice of BSO

Table 7: Represents the incidence of bilateral salpingo-oophorecto my done

BSO	Total Cases(n)	Percentage (%)
Done	110	55 %
Not Done	90	45 %

were noted, and the most typical complication noted was excessive bleeding requiring blood transfusion (13.5%) and the least common complication was bowel injury (0.5%). Total of 37 patients was found to have complications and the same listing in the table (Table 8)

Table 8: Represents the common complications

Complications	Total Cases(N=37)	Percentage (%)
Excessive bleeding	27	13.5
Surgical site infection	3	1.5
Bladder injury	3	1.5
Secondary Haemorrhage	3	1.5
Bowel injury	1	0.5

DISCUSSION

This study was conducted at Saveetha Medical College and Hospital, where a total of 200 hysterectomies were performed in the year 2019. Women of age 40-50 years had most of the hysterectomies done, and excessive bleeding was the most typical presenting complaint. Leiomyoma uterus with or without AUB was the leading cause for hysterectomy. Most of the procedures done were total abdominal hysterectomies, while vaginal hysterectomy was the second most common type. Very few hysterectomies were done using laparoscopic methods. Among the women who underwent a hysterectomy, 55% of them underwent concurrent bilateral salpingo-oophorectomy.

There has been a lot of studies analysing the trends of hysterectomy both in India and in other countries similar to our study. In 2011, a study was conducted in Denmark to analyse the trends of hysterectomy showed that there was a change in the pattern of indications for hysterectomy and a rise in the percentage of minimally invasive surgical procedures. Abnormal uterine bleeding was the most common indication (Lykke *et al.*, 2013), and the same was found in the index study. In 2016, a study conducted in Poland described that the preference to less invasive techniques such as laparoscopic methods and subtotal hysterectomy in 15 years (Romanek-Piva *et al.*, 2016). In 2015-2016, NFHS-4 survey collected the information about hysterectomies for the first time. Six per cent of women in India in the age group of 30-49 years had undergone a hysterectomy. Excessive bleeding or pain was the most common reason for hysterectomy (56%), and the index

study also has the indication of abnormal bleeding and pain abdomen as the common indications. It was found that more rural women in the age group 45-49 years were predisposed to undergo hysterectomy especially those without schooling, high parity and those living in east and south India (Desai *et al.*, 2015) and this is consistent with the present study. This could be in turn due to either lack of awareness among these rural women or an unwillingness for a followup, thus getting subjected to an unnecessary procedure. (Meher and Sahoo, 2020) showed that a large number of unnecessary hysterectomies are being done in the private sector with excessive bleeding being the most common indication. Regarding bilateral salpingo-oophorectomy, a systematic review published in 2016 showed that though it offers protection against ovarian cancer, it can result in other medical complications especially in women under the age of 45 years (Evans *et al.*, 2016). In our study, the most common age group undergoing hysterectomy was between 40-49 years, and 55% of women underwent bilateral salpingo-oophorectomy.

In 2019, another study demonstrated that genital prolapse was the most common indication and modern medical management and minimally invasive procedures were still not accepted among the rural population in a widespread manner (Singh, 2019). Our study also shows that the utilisation of minimally invasive techniques is still not widespread in a rural setup, and there is an increased tendency to resort to open abdominal hysterectomy. It could be in turn attributed to cost, expertise and facilities available.

Despite a marked increase in management options for fibroid uterus and abnormal uterine bleeding such as medical management, intrauterine devices, less invasive procedures such as endometrial ablation for AUB and techniques like embolisation using interventional radiology, women in rural India still prefer hysterectomy over them. It could be due to literacy, socioeconomic status and prevailing taboo about menstrual bleeding which has to be analysed using studies focussing them so that appropriate measures can be taken to educate these women and improve their quality of life.

The need to increase awareness among clinicians is also required to allow them to choose a non-invasive method for benign uterine conditions before resorting to hysterectomy. It necessitates the need for appropriate training in minimally invasive techniques and other newer methods. Financial constraint is the other factor restraining both the patient and the doctor from choosing a technique other than definitive surgery, as it is time-consuming and may not offer benefit in all women along with incurring costs. It also has to be addressed.

The prevalence of vaginal hysterectomy was low (21%) in our study as compared to open abdominal hysterectomy (69%) despite a well-known fact that the rural women are more predisposed to genital prolapse due to home deliveries (Singh, 2019). This may be because of less prevalence of genital prolapse in the study population or may be attributed to those who didn't seek medical centre for prolapse or willing for conservative management.

Regarding the complications of the surgery, bleeding was the most common complication. At the same time, injury to abdominal organs was minimal in the present study and the same was proven in the study by (Cosson *et al.*, 2001). This could be attributed to the expertise of surgeons in open surgery. However, the data is likely to change if an increasing number of laparoscopic surgeries are being performed.

Strength and Limitations

The strength of this study is, it is focussed about hysterectomy in rural south India where only a few similar studies are done till now. The limitation of the study is it is retrospective and descriptive, not powerful enough to conclude. Further prospective studies of longer duration can be added in the future.

CONCLUSIONS

Although the most common type of hysterectomy performed is abdominal hysterectomy, the desired outcomes are similar in all types of hysterectomies. However, the patients who are undergoing Total Abdominal Hysterectomy can choose minimally invasive techniques like Laparoscopic-assisted vagina hysterectomy or Vagina hysterectomy or even Laparoscopic hysterectomy. The use of these minimally invasive techniques should be promoted much more as they reduce the complications of Abdominal Hysterectomy. This can minimise the bleeding complications seen more in the open surgery. There is a considerable reduction in the total number of hysterectomies done, and people opting for medical management instead. Still, this trend is not seen to be followed in rural parts of India. Practice style of a surgeon, personal preference and the level of knowledge among patients may lead them to undergo a hysterectomy. The level of awareness amongst the rural population of our country needs to be improved, and necessary facilities in the rural hospitals should be brought up to encourage alternative routes in per-

forming minimally invasive procedures for benign uterine conditions. Alternative medical management has to be explored before committing to permanent procedures. The most typical indication being leiomyoma, for which hysterectomy is the definite treatment, other medical management like the use of ulipristal can be tried initially, and the levonorgestrel-releasing system can be used. BSO should be done only if the benefit out ways the effect of removal of ovarian hormones. These findings can be useful in improving the effectiveness of alternative treatment. This also shows that there is a need to study the psychological aspects governing the acceptance of surgical management in preference to conservative management in these rural women.

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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