An Observational Study on the Age Group of Women Undergoing Hysterectomy in Eastern Part of India

Susmita Basu[1]. Ritaban Saha[2], Mithu Paul[3], Shubhasis Banerjee[4]

[1]Department of Anatomy, Calcutta National Medical College and Hospital, Kolkata, West Bengal, India. [2]Department of Anatomy, Calcutta National Medical College and Hospital, Kolkata, West Bengal, India. [3]Calcutta National Medical College and Hospital, Kolkata, West Bengal, India. [4]Department of Gynaecology, AMRI, Mukundapur, West Bengal, India.

ABSTRACT

BACKGROUND
Hysterectomy is the most common non-pregnancy related major surgery performed on women. Hysterectomy is usually performed by abdominal, vaginal or laparoscopic route. The lifetime risk of hysterectomy ranges from 20% - 35%. Hysterectomy is done generally in late perimenopausal and postmenopausal age groups. Hysterectomy is done for various indications, like menorrhagia, uterine prolapse, postmenopausal bleeding etc. These indications in turn may be due to pathologies like fibroid uterus, adenomyosis, endometrial polyp, endometrial hyperplasia or even endometrial cancer. Pathologies are different depending upon the age.

METHODS
In this study 100 women undergoing abdominal and vaginal hysterectomy in Calcutta National Medical College and Hospital, Kolkata were grouped into different age groups and their percentages were calculated. Women undergoing caesarean hysterectomies and cancer surgeries were excluded.

RESULTS
We found that 43 patients were of 41-45 years of age which is significantly higher than other age groups. Other studies except a few had similar results. The greater percentage of hysterectomy was by abdominal route (75%), rest were done by vaginal route (25%). Indications also dictate the route of hysterectomy. Vaginal route was opted for the uterovaginal prolapse cases. Only 2 cases of non-descent vaginal hysterectomies were performed.

CONCLUSIONS
Hysterectomies in earlier than 40 years should be without oophorectomies because of ill effects of loss of estrogen. But keeping behind a potential organ for cysts and cancer is risky as well. So, a risk benefit balance has to be considered. Since perimenopausal age group came out to be the commonest one undergoing hysterectomy, postmenopausal symptoms and its effects remains a matter of concern which needs close follow-up and necessary management.

KEY WORDS
Hysterectomies, Abdominal Route, Vaginal Route, Age, Perimenopausal.

J. Evolution Med. Dent. Sci./eISSN- 2278-4802, pISSN- 2278-4748/ Vol. 9/ Issue 19/ May 11, 2020

Page 1559

BACKGROUND

Hysterectomy is the most common non-pregnancy related major surgery performed in women. This surgical procedure involves removal of the uterus in the management of benign diseases and also for oncological cases like cervical intra epithelial neoplasia (CIN), cancer of corpus uterine, cervix and ovary. Hysterectomy is the definitive treatment for many of benign diseases like dysfunctional uterine bleeding, fibroids, uterovaginal prolapse, endometriosis, adenomyosis, pelvic inflammatory disease and chronic pelvic pain.[1] The lifetime risk of hysterectomy ranges from 20% - 35% according to various studies.[2,3,4] Hysterectomy is usually performed by abdominal, vaginal and laparoscopic routes.[5] Historically, Charles Clay performed the first subtotal hysterectomy in Manchester, England in 1843 and the first total abdominal hysterectomy was done in 1929.

In virtually all studies leiomyoma is consistently the leading indication of hysterectomy in the reproductive age group. [6] Uterovaginal prolapse, postmenopausal bleeding are indications for hysterectomy in postmenopausal group. Vaginal hysterectomy is generally done in cases of uterine prolapse. Nondescent prolapse can also be taken out through the vaginal route. Uterine fibroids, adenomyosis, large uterus are better operated via abdominal route. Since hysterectomy is a major operation it is not without risk in terms of morbidity and mortality. The patients may be hospitalised for several days and may require 6-12 weeks of convalescence. Complications such as haemorrhage, infection, injury to adjacent organs, need for blood transfusion may occur.[7]

Hysterectomy around age of forty or beyond generally includes bilateral salpingo-oophorectomy, to avoid leaving behind a potential organ which later on may lead to cysts or cancer. Post-operative after variable period of time, women may suffer from postmenopausal symptoms of variable degree. Symptoms may appear more distressing for women hysterectomised at an earlier age. Having said these, it is worth mentioning that hysterectomy should be performed when the risk of preserving uterus is greater than the risk of its removal or when there are disabling symptoms for which there is no successful medical management.[8]

In this study, the age of women has been taken into account and type of hysterectomy they have undergone. Women who underwent hysterectomy in eastern India at these age groups will give idea regarding the number of women utilising the resources for hysterectomy in a government hospital setup in eastern India. In future studies, these women when followed up, will give idea about the amount of women with postmenopausal symptoms, treatment modality they are responding to, and even the amount of this population needing orthopaedic support or gynaecological operations for vault prolapse.

We wanted to evaluate cases of hysterectomies. We also wanted to identify and study the pattern with respect to age.

METHODS

Study Area
Calcutta National Medical College & Hospital, Kolkata.

Study Design
Observational and Descriptive study.

Study Period
October, 2017 to October, 2018 (one year)

Study Population
Women who underwent hysterectomy in Department of Gynecology and Obstetrics in CNMC&H during the period of study.

Sample Size with Justification
The study was an observational study. As per the study by Ebinesh et al (9) clinical presentations of patients subjected to hysterectomy was Irregular bleeding (60.0%). Thus for this study p=0.60. The number of patients required for this study was 100.36-100 with power 86%. The formula used for sample size calculation is as follows-

$$n = \frac{4pq}{L2}$$

Where
n= required sample size
p=0.60 as per the study of Ebinesh et al.
q=1-p
L=Loss % (Loss of information) = 16.3%-16%

Here p=0.60, q=1-p=0.40, Loss%=16.3%
4pq = 4 × 0.60 × 0.40 = 0.96
L2 = (0.60 × 0.163)2 = 0.0096

So

$$n = \frac{0.96}{0.00096} = 100.36 - 100$$

Inclusion Criteria
1. Patients undergoing hysterectomy for various clinical reasons.
2. The patients who were not benefitted by conservative or medical management, in whom surgery was not a contraindication.
3. The patients who signed on the consent form.

Exclusion Criteria
1. The patients who underwent obstetric hysterectomy.
2. The patients who did not sign the consent form for participating in the study.

Collection of Data
The study was done at Calcutta National Medical College & Hospital, Kolkata. The present dissertation was based on the prospective study on 100 consecutive cases of hysterectomy (following inclusion and exclusion criteria applied) in Department of Gynaecology and Obstetrics in CNMC&H. The study was carried out according to the preplanned proforma.

Data of age, parity, clinical findings of patients undergoing hysterectomy in the said department were kept in record.

Complete history was recorded in each case followed by general, abdominal, vaginal and speculum examination. Pap smear was performed in all patients. Ultrasonography was done in all patients. Ultrasonography revealed cases of fibroid uterus, adenomyosis, sometimes fibroid with adenomyosis, thickened endometrium, adnexal pathology etc.

Consent
Consent was taken from all participants before they were taken into the study. They were informed in details regarding intentions of the study. That they would not be requiring any extra tests, personal details, procedures, treatment, or even extra visits or expenditure other than which would be required for their treatment itself. We would be only using the data of the management which would be required for those individual cases. We also emphasized that they could leave the study whenever they wished and that would not harm them in any way or they would not require to make any compensation. They were asked to sign on consent papers written in their vernacular, ie. Bengali, Hindi or if anyone chose English.

Ethical Committee Clearance
Clearance certificate was received from the Ethical Committee.

Statistical Analysis
For statistical analysis data were entered into a Microsoft excel spreadsheet and then analyzed by SPSS (version 24.0; SPSS Inc., Chicago, IL, USA) and Graph Pad Prism version 5. Data had been summarized as mean and standard deviation for numerical variables and count and percentages for categorical variables. Z-test (Standard Normal Deviate) was used to test the significant difference of proportions. Unpaired proportions were compared by Chi-square test or Fischer's exact test, as appropriate. p-value ≤ 0.05 was considered for statistically significant.

RESULTS

12 (12.0%) patients had $\leq$40 years of age, 43 (43.0%) patients had 41-50 years of age, 21 (21.0%) patients had 51-60 years of age and 24 (24.0%) patients had >60 years of age. The value of z is 2.8465. The value of p is 0.00438. The result is significant at p <.05. The mean age (mean ± S.D.) of the patients was 51.0800 ± 8.1954 years. 3 (3.0%) patients had TAH, 72 (72.0%) patients had TAH and BSO and 25 (25.0%) patients had vaginal hysterectomy. The value of z is 6.6498. The value of p is <.00001. The result is significant at p <.05.

Age in (Yrs.)	Frequency	Percent
≤40	12	12.0%
41-50	43	43.0%
51-60	21	21.0%
>60	24	24.0%
Total	**100**	**100.0%**
Table 1. Distribution of Age		

	Number	Mean	SD	Minimum	Maximum	Median
Age in (yrs.)	100	51.0800	8.1954	36.0000	66.0000	50.0000
Table 2. Distribution of Mean Age						

Type of Hysterectomy	Frequency	Percent
TAH	3	3.0%
TAH and BSO	72	72.0%
Vaginal Hysterectomy	25	25.0%
Total	**100**	**100.0%**
Table 3. Distribution of Type of Hysterectomy		

Age Group	<=4	41-50	51-60	>60	Total
TAH	2	0	0	0	2
TAH with BSC	8	32	19	14	73
VH	2	11	2	10	25
Total	**12**	**43**	**21**	**24**	**100**
Table 4. Distribution of Type of Hysterectomy According to Age					

DISCUSSION

We found that 43 (43.0%) patients had 41-50 years of age which was significantly higher than other age groups (Z= 2.8465; p= 0.00438) and the mean age (mean ± S.D.) of the patients was 51.0800 ± 8.1954 years. Age >60 years belong to the prolapsed cases and postmenopausal bleeding cases. Uterovaginal Prolapse cases were the ones who underwent vaginal hysterectomy. Details regarding clinical presentation is beyond the scope of this article. It is part of our entire research and will be discussed in future papers.

Perveen S et al (2008) [10] found that peak age incidence was 41-50 years and peak parity was 4-6. Ebinesh A et al [9] found that the commonest age group for abdominal hysterectomy was between 41- 50 years. Abdullah LS et al [11] found that the patient's age ranged between 23-90 years with an average age of 49 years old. Gangardharan V et al (2016), [12] found 40-49 years being the commonest (41%) age group. Abdominal hysterectomy was done in 72% and rest by vaginal route. Pervez S N et Al (2014), [13] found peak incidence (51%) in 31-40 years age group which was quite an early age to have hysterectomy. In our study we found only 12% cases undergoing hysterectomy in age group <=40 years.

Saleh et Al (2012) [14] found mean age group to be 49.1 years but had 107 patients with hysterectomy alone and 30 patients had hysterectomy with bilateral salpingo-oophorectomy. Mean age around 50 years and patients undergoing hysterectomy alone can be risky as a potentially cancer-prone organ like ovary is kept behind at the perimenopausal age. The greater percentage of the only hysterectomy group was not because of vaginal route even, as, in their study, the incidence of abdominal route was 89% and vaginal was only 11%. For such cases, follow-up for future ovarian tumours, neoplastic or non-neoplastic, is extremely crucial.

CONCLUSIONS

Perimenopausal age group came out to be the commonest one undergoing hysterectomy. Hysterectomy in this age group may come up with postmenopausal symptoms and complications. So, proper counselling prior to the operation is crucial from both the patient and the surgeon's perspectives.

If other treatment modalities are adequate for the case concerned, that is to be sought after. If operation is the only available choice, risk versus benefit should be taken into account and decisions should be individualised. If hysterectomy is performed, proper care of these women, especially those undergoing oophorectomy in pre- and peri-menopausal age, is a challenge in order to reduce down the medical and psychological morbidity.

Limitations

- Small sample size
- Single centre study.
- The study was carried out in a tertiary care hospital, so hospital bias cannot be ruled out.

REFERENCES

[1] Nausheen F, Iqbal J, Bhatti FA, et al. Hysterectomy: the patient's perspective. Annals Gynecol 2004;10:339-41.

[2] Sait K, Alkhattabi M, Boker A, et al. Hysterectomy for benign conditions in a university hospital in Saudi Arabia. Am Saudi Med 2008;28(4):282-6.

[3] Spilsburry K, Semmens KB, Hammond I, et al. Persistent high rates of hysterectomy in Western Australia: a population based study of 83,000 procedures over 23 years. BJOG 2006;113(7):804-9.

[4] MacKenzie IZ, Naish C, Rees M, et al. 1170 consecutive hysterectomies: indications and pathology. Journal of British Menopause Society 2004;10(3):108-12.

[5] Yakasai IA. Complications of hysterectomy – a review. British Journal of Science 2013;9(2).

[6] Ara S, Roohi M. Abnormal uterine bleeding: histopathological diagnosis by conventional dilatation and curettage. Professional Med J 2011;18(4):587-91.

[7] Gambone JC, Reifer RC. Hysterectomy. Clinical Obstet Gynaecol 1990;33:205-11.

[8] Khan R, Sultana H. How does histopathology correlate with clinical and operative findings in abdominal hysterectomy. JAFMC Bangladesh 2010;6(2):17-20.

[9] Ebinesh A, Sharada MS, Krishna MC. Clinico-pathological correlation of abdominal hysterectomy specimens. Int J Sci & Res 2015;4(6):1084-9.

[10] Perveen S, Tayyab S. A clinicopathological review of elective abdominal hysterectomy. Journal of Surgery Pakistan (International) 2008;13(1):27.

[11] Abdullah LS. Hysterectomy: a clinicopathologic correlation. Bahrain Medical Bulletin 2006;28(2):1-6.

[12] Gangadharan V, Prasanthi C. Hysterectomy - a clinico-pathological correlation in a rural setting. Indian J Basic Appl Med Res 2016;5:8-15.

[13] Pervez SN, Javed K, Obald M. Hysterectomy: a clinicopathological correlation. KJMS 2014;7(2):295-7.

[14] Saleh SS, Fram K. Histopathology diagnosis in women who underwent a hysterectomy for a benign condition. Archives of Gynecology and Obstetrics 2012;285(5):1339-43.