

# To know the incidence of hysterectomy among north Indian women of less than forty years of age as per the new guidance of MoHFW and honorable Supreme Court directive

## Abstract

**Background:** This study investigates the clinico-demographic profile of women who underwent hysterectomy, analyzing various factors including the year of surgery, socio-economic status, parity, and post-operative complications. The study was conducted at the Department of Obstetrics and Gynecology, IMS BHU, in collaboration with the Department of Endocrinology, IMS BHU.

**Methods:** This prospective study included 200 women aged 18-40 years who had undergone hysterectomy. Data were collected over a period of two years, focusing on parameters such as the distribution of cases based on the year of hysterectomy, socio-economic status, parity, indications for hysterectomy.

**Results:** The majority of hysterectomies were performed 1-3 years previously (56.5%). Most patients (98.5%) were Hindu, and the majority belonged to the lower middle class (52.5%). The most common indication for hysterectomy was fibroids (42.0%), followed by PV discharge (28.0%) and heavy menstrual bleeding (15.0%).

**Conclusion:** This study highlights the clinico-demographic profile and outcomes of women undergoing hysterectomy, emphasizing the prevalence of complications such as urinary incontinence and hot flashes. The findings align with previous studies, underscoring the need for comprehensive post-operative care.

**Keywords:** hysterectomy, clinico-demographic profile, post-operative complications, anemia correction, socio-economic status, MoHFW, Supreme Court directives

**Brief summary:** This study highlights the clinico-demographic profile and outcomes of women undergoing hysterectomy, emphasizing the prevalence of complications such as urinary incontinence and hot flashes. The findings align with previous studies, underscoring the need for comprehensive post-operative care in a women who has early age.

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## Introduction

Hysterectomy, the surgical removal of the uterus, is one of the most commonly performed gynecological procedures worldwide. While it is often considered a definitive treatment for various benign and malignant conditions, the decision to perform a hysterectomy, particularly in women under the age of 40, requires careful consideration due to the significant impact on reproductive and hormonal health.<sup>1</sup>

In India, the Ministry of Health and Family Welfare (MoHFW) along with the Honorable Supreme Court has recently issued new guidelines and directives aimed at regulating the indications and ensuring the appropriateness of hysterectomies, especially in younger women.<sup>2</sup> These directives emphasize the need for stringent criteria and thorough clinical evaluations before proceeding with the surgery, reflecting concerns over the rising number of unnecessary hysterectomies being performed across the country.<sup>2</sup>

Recent studies have highlighted a concerning trend in the incidence of hysterectomies among younger women, particularly in certain regions of India. Factors contributing to this trend

include socioeconomic pressures, lack of access to comprehensive gynecological care, and in some cases, a lack of adherence to clinical guidelines.

Six percent of women in the age group 30–49 years have undergone a hysterectomy in India as a whole. Women who come from rural areas, had no schooling, have a body mass index more than or equal to 25 kg/m<sup>2</sup>, belong to a high wealth quintile household, have higher parity, had a low age at marriage, and are from eastern and southern India are more likely to undergo a hysterectomy. Among the main reasons for hysterectomy reported by women aged 30–49 years are excessive menstrual bleeding/pain (56%), fibroids/cysts (20%), uterine disorder, such as rupture (14%), and uterine prolapse (8%).<sup>3</sup>

A study by Desai et al.<sup>4</sup> reported that a significant proportion of hysterectomies in rural India were performed on women under 40 years, often without exhausting less invasive treatment options.<sup>4</sup> Similarly, a report by the National Health Mission in India indicated a need for more stringent regulatory mechanisms to prevent unnecessary hysterectomies and to protect women's health and rights (National Health Mission, 2020).<sup>5</sup>

The aim of this study is to determine the incidence of hysterectomy among North Indian women under the age of 40, in light of the new guidelines issued by the MoHFW and directives from the Supreme Court. By analyzing the incidence and indications for hysterectomy in this demographic, this study seeks to provide insights into the current practices and to identify areas where adherence to the new guidelines can be improved. This research is crucial for developing strategies to ensure that hysterectomy is performed only when absolutely necessary and that alternative treatments are adequately considered.

## Materials & methods

**Study design:** This was a prospective study conducted in the Department of Obstetrics and Gynecology at IMS BHU, in collaboration with the Department of Endocrinology, IMS BHU.

**Study period:** The study was conducted over a period of 2 years.

**Study population:** The study population consisted of general unselected females visiting the Department of Obstetrics and Gynecology at IMS BHU. The population included women aged 18-40 years who met the inclusion criteria.

### Selection of patients

**Inclusion criteria:** Women aged 18-40 years, who were general unselected females, asymptomatic, non-pregnant, had undergone hysterectomy, and were operated on in peripheral areas were included in the study.

**Exclusion criteria:** Children and adolescents aged 18 years or younger, pregnant adolescents, and postmenopausal women were excluded from the study.

### Plan of study and techniques employed

**Sample size:** A total of 200 cases were enrolled in the study.

### Method of study

- Retrospective observation:** This study involved the retrospective observation of patients.
- Data collection:** Proper data collection was ensured through regular outpatient department (OPD) visits. The data collected

included demographic details, clinical history, and relevant clinical examinations.

### Procedure

**Initial Screening:** Patients were screened based on the inclusion and exclusion criteria.

**Informed Consent:** Eligible patients were informed about the study, and written informed consent was obtained.

### Data collection

**Demographic data:** Age, religion, marital status, and parity, socioeconomical status.

**Clinical history:** Detailed history including past medical history, surgical history, and any relevant family history.

**Clinical examination:** A thorough clinical examination was performed, and findings were documented.

**Collaboration with endocrinology:** Relevant endocrinological evaluations and tests were conducted in collaboration with the Department of Endocrinology, IMS BHU.

### Statistical analysis

The collected data was analyzed using SPSS ver-26. Descriptive statistics was used to summarize the data. Continuous variables were presented as means and standard deviations, while categorical variables were presented as frequencies and percentages.

### Tools and techniques

**Clinical tools:** Standard clinical tools and instruments were used for patient examination and data collection.

## Results

In Table 1. The systematic examination findings for Per Abdomen revealed that 100% of the cases (200) had a soft abdomen. Per Speculum examination showed that 65% (130 cases) had a healthy vault, 17.5% (35 cases) had discharge, 10% (20 cases) had cystocele, 5% (10 cases) had vault prolapse and 2.5% (5 cases) had cyst o-rectocele findings. In total, 200 cases were examined.

**Table 1** Classification of thyroid dysfunction: biochemical definition

| Condition                   | TSH level                  | Thyroid hormones  | Comments              |
|-----------------------------|----------------------------|-------------------|-----------------------|
| Overt hyperthyroidism       | <0.1 mIU/L or undetectable | Elevated T4 or T3 |                       |
| Overt hypothyroidism        | >4.5 mIU/L                 | Low T4            |                       |
| Subclinical hyperthyroidism | <0.1 mIU/L                 | Normal T4 and T3  | Clearly low serum TSH |
| Subclinical hypothyroidism  | 0.1 to 0.4 mIU/L           | Normal T4 and T3  | Low but detectable    |
|                             | 4.5 to 10 mIU/L            | Normal T4         | Mildly elevated TSH   |
|                             | ≥10 mIU/L                  | Normal T4         | Markedly elevated TSH |

Table 2 presents the distribution of cases based on the year of hysterectomy among 200 patients. The data shows that 113 cases (56.5%) underwent hysterectomy 1-3 years previously. In the 4-6 years previous category, there were 37 cases (18.5%). A total of 23

cases (11.5%) had their hysterectomy 7-10 years ago, while 6 cases (3.0%) underwent the procedure 11-15 years previously. Finally, 21 cases (10.5%) had their hysterectomy more than 15 years ago.

**Table 2** The distribution of cases based on the year of hysterectomy (n=200)

| Year of hysterectomy   | No of cases | Percentage |
|------------------------|-------------|------------|
| 1-3 years previous     | 113         | 56.5       |
| 4 – 6 years previous   | 37          | 18.5       |
| 7 – 10 years previous  | 23          | 11.5       |
| 11 – 15 years previous | 6           | 3          |
| >15 years previous     | 21          | 10.5       |
| Total                  | 200         | 100        |

Table 2 presents the distribution of religion. The data indicates that the vast majority, 197 cases (98.5%), were Hindu, while only 3 cases (1.5%) were Muslim.

Table 3 outlines the distribution of parity. The data shows that 11 cases (5.5%) had a parity of 1, 49 cases (24.5%) had a parity of 2, and 57 cases (28.5%) had a parity of 3. Additionally, 48 cases (24.0%) had a parity of 4, while 35 cases (17.5%) had a parity greater than 4.

**Table 3** Distribution of parity (n=200)

| Parity | No of cases | Percentage |
|--------|-------------|------------|
| 1      | 11          | 5.5        |
| 2      | 49          | 24.5       |
| 3      | 57          | 28.5       |
| 4      | 48          | 24         |
| >4     | 35          | 17.5       |
| Total  | 200         | 100        |

Table 4 details the distribution of socioeconomical status. There were no cases (0.0%) in the upper class, while 12 cases (6.0%) were from the upper middle class. The middle class comprised 26 cases (13.0%). A significant portion, 105 cases (52.5%), belonged to the lower middle class, and 57 cases (28.5%) were from the lower class.

What was done for PVB - One patient was presented with vaginal bleeding and vault biopsy was done which was nonmalignant.

In Table 6. The distribution of hysterectomy routes among the 200 cases showed that the vast majority, 97% (194 cases), underwent an abdominal hysterectomy, while only 3% (6 cases) underwent a vaginal hysterectomy.

**Table 6** Route of hysterectomy (n=200)

| Route of hysterectomy | No. of cases | Percentage (%) |
|-----------------------|--------------|----------------|
| Vaginal               | 6            | 3              |
| Abdominal             | 194          | 97             |
| Total                 | 200          | 100            |

In Table 7, post-operative complications were observed in 174 out of the 200 cases. Haemorrhage occurred in 85 cases (42.5%), infection in 59 cases (29.5%), and injury to the bladder, and bowel in 24 cases (12.0%). Injury to the bladder alone was reported in 6 cases (3.0%). There were no complications in 26 cases, accounting for 13.0% of the total.

**Table 7** Immediate Post-op complication (n=200)

| Post op complication        | No. of Cases | Percentage (%) |
|-----------------------------|--------------|----------------|
| Haemorrhage                 | 85           | 42.5           |
| Infection                   | 59           | 29.5           |
| Injury to bladder and bowel | 30           | 12             |
| No complication             | 26           | 13             |
| Total                       | 200          | 100            |

**Table 4** Distribution of socioeconomical status (n=200)

| Socioeconomical status | No of cases | Percentage |
|------------------------|-------------|------------|
| Upper Class            | 0           | 0          |
| Upper middle class     | 12          | 6          |
| Middle class           | 26          | 13         |
| Lower middle Class     | 105         | 52.5       |
| Lower class            | 57          | 28.5       |
| Total                  | 200         | 100        |

In Table 5. The distribution of chief complaints after hysterectomy among the 200 patients studied revealed that the most common complaint was abdominal pain, reported by 139 patients, which accounted for 69.5% of cases. Burning micturition was the second most frequent complaint, experienced by 88 patients, representing 44.0% of the total. Per vaginal discharge was noted in 41 cases, making up 20.5% of the complaints. Vault prolapse was reported by 38 patients, constituting 19.0% of the complaints. Dyspareunia in 25 patients representing 12.5% complaints. Per vaginal bleeding in 1 patient account 0.5% complaint. Lastly, right iliac pain was reported by only 1 patient, representing 0.5% of the complaints.

**Table 5** Distribution of chief complain after hysterectomy (n=200)

| Chief complain        | No of cases | Percentage |
|-----------------------|-------------|------------|
| Pain Abdomen          | 139         | 69.5       |
| Burning micturition   | 88          | 44         |
| Per Vaginal discharge | 41          | 20.5       |
| Vault prolapse        | 38          | 19         |
| Dyspareunia           | 25          | 12.5       |
| PV bleeding           | 1           | 0.5        |
| Right iliac pain      | 1           | 0.5        |

How was it recorded? What did the patient present with? Where were they managed? BHU?

The Table 8. Late changes experienced after hysterectomy in 200 patients indicates that hot flashes were the most common, affecting 135 patients, or 67.5% of the total. Urinary incontinence was the second most frequently reported change, experienced by 84 patients, accounting for 42.0%. Mood swings were noted in 74 cases, representing 37.0% of the patients. Palpitations were experienced by 35 patients, making up 17.5% of the total. Chest pain was reported by 21 patients, which is 10.5% of the cases. Osteoporosis, irritability, and insomnia were each reported by only 1 patient, accounting for 0.5% of the total for each condition.

**Table 8** Late changes experienced after hysterectomy (n=200)

| Change experienced   | No. of cases | Percentage (%) |
|----------------------|--------------|----------------|
| Urinary Incontinence | 84           | 42             |
| Hot Flashes          | 135          | 67.5           |
| Mood Swings          | 74           | 37             |
| Chest Pain           | 21           | 10.5           |
| Palpitation          | 35           | 17.5           |
| Osteoporosis         | 1            | 0.5            |
| Irritability         | 1            | 0.5            |
| Insomnia             | 1            | 0.5            |

The mean FSH level among the 200 cases is 61.03 with a standard deviation of ±39.25 (Table 9).

**Table 9** Mean FSH level (n=200)

| FSH | Mean  | SD     |
|-----|-------|--------|
|     | 61.03 | ±39.25 |

In Table 10. Outlining the indications for hysterectomy among 200 patients shows that fibroids were the most common reason for the procedure, accounting for 84 cases or 42.0% of the total. Post-vaginal (PV) discharge was the second most frequent indication, with 62 patients, representing 31.0%. Heavy menstrual bleeding (HMB) led to hysterectomy in 40 cases, making up 20.0% of the indications. Prolapse was noted in 13 cases, accounting for 6.5%. Both dysmenorrhea and ovarian cysts were indications for hysterectomy in 4 patients each, representing 2.0% each. Infection accounted for 3 cases or 1.5%, while pyometra was the indication for 2 cases, constituting 1.0% of the total.

The Table 11 on the cost of hysterectomy for 200 patients indicates that the majority of surgeries fell within the cost range of 10,000 to 20,000, with 136 cases or 68% of the total. Among these, the largest group was from the lower middle class, representing 80 patients or 58.8%, followed by the lower class with 47 patients or 34.5%. In the cost bracket of less than 10,000, there were 11 cases, predominantly from the lower class, accounting for 8 patients or 72.7%, and 2 cases from the middle class, representing 18.1%. For surgeries cost between 20,000 and 40,000, there were 18 cases, with the middle class being the most represented group at 50%, totaling 9 patients. In the highest cost category of over 40,000, there were 35 cases, with the majority

**Table 11** Cost of hysterectomy (n=200)

| Cost          | No. of cases | Upper class | Upper Middle class (n=12) | Middle class (n=26) | Lower middle class (n=105) | Lower class (n=57) |
|---------------|--------------|-------------|---------------------------|---------------------|----------------------------|--------------------|
| <10000        | 11           | 0 (0.0%)    | 0 (0.0%)                  | 2 (18.1%)           | 1 (9.0%)                   | 8 (72.7%)          |
| 10000 - 20000 | 136          | 0 (0.0%)    | 0 (0.0%)                  | 9 (6.6%)            | 80 (58.8%)                 | 47 (34.5%)         |
| 20000 - 40000 | 18           | 0 (0.0%)    | 3 (16.6%)                 | 9 (50.0%)           | 5 (27.7%)                  | 1 (5.5%)           |
| >40000        | 35           | 0 (0.0%)    | 9 (25.7%)                 | 6 (17.1%)           | 19 (54.2%)                 | 1 (2.8%)           |
| Total         | 200          | 0 (0.0%)    | 12 (6.0%)                 | 26 (13.0%)          | 105 (52.5%)                | 57 (28.5%)         |

Statistical Inferences  
Chi-square- 86.6132  
p value-<0.0001

**Table 10** Indications for hysterectomy (n=200)

| Indication                     | No. of cases | Percentage (%) |
|--------------------------------|--------------|----------------|
| Fibroid                        | 84           | 42             |
| PV Discharge                   | 62           | 31             |
| HMB (Heavy Menstrual Bleeding) | 40           | 20             |
| Prolapse                       | 13           | 6.5            |
| Dysmenorrhea                   | 4            | 2              |
| Pyometra                       | 2            | 1              |
| Infection                      | 3            | 1.5            |
| Ovarian Cyst                   | 4            | 2              |

being from the lower middle class, accounting for 54.2% or 19 patients. The distribution across economic classes shows no patients from the upper class and a varying number from the upper middle class, which includes 3 patients (16.6%) in the 20,000 to 40,000 range and 9 patients (25.7%) in the above 40,000 range. Statistical analysis using the Chi-square test resulted in a value of 86.6132 and the P-value was less than 0.0001, indicating a significant association between cost and socio-economic class.

Patient received Iron and calcium and none of patients received vaginal estrogen and HRT.<sup>6-19</sup>

## Conclusion

**Cost:** It was varied hospital to hospital.

- In government hospitals it was low cost of hysterectomy
- In private hospitals ,high cost than government hospitals

## Complications

Immediate complications includes heavy bleeding during and after the surgery , risk of blood transfusion, damage to surrounding organs and blood vessels like the bladder , urethra, uterine artery and nerves, blood clots in the legs and lungs, breathing problems due to anaesthesia.

**Short term:** fever and chills, persistent nausea and vomiting, infection at incision site, excessive bleeding, requirements of blood transfusion, difficulty with bowel function, difficulty voiding, pain, chest pain, calf pain.

**Long term:** bladder dysfunction due to cystocele formation, stress incontinence, vaginal vault prolapse.

Long term effects of decreased hormone levels - surgically induced

menopause including hot flashes, night sweats, insomnia, vaginal dryness, recurrent UTI, mood changes, irritability, osteoporosis and cardiac disease.

Were they given education for themselves and at the society level to manage case needing hysterectomy - it was done at BHU.

Hysterectomy in women under 40 years of age can lead to various complications both immediately after surgery and in the long term. The high prevalence of postoperative issues such as hemorrhage, infection, and significant hormonal changes underscores the necessity for thorough preoperative evaluation and robust postoperative management. Patient education regarding potential long-term complications is crucial to ensure informed decision-making and preparedness for the postoperative period.

Our study's adherence to MoHFW guidelines and Supreme Court directives underscores the importance of ethical medical practices, patient education, and rigorous eligibility criteria in managing hysterectomy cases. By following these standards, we aim to enhance patient outcomes, ensure compliance with legal and medical guidelines, and contribute to the overall improvement of gynecological care.

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## Conflicts of interest

The authors declare that they have no competing interests.

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