

Hysterectomy Audit at Tertiary Care Rural Institute of Northern Maharashtra, State of India

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ABSTRACT

Background: Hysterectomy is a surgical procedure carried out all over the world for numerous benign and malignant gynaecologic conditions like fibroid uterus, abnormal uterine bleeding(AUB), carcinoma cervix, carcinoma endometrium and ovary. This study aims to determine the proportion of hysterectomies done for pelvic organ prolapse at a tertiary care rural institute.

Methods: This is a hospital-based descriptive study of 269 cases of hysterectomies conducted in the department of obstetrics & gynaecology for a period of one year.

Results: Out of the 269 hysterectomies performed, mean age for hysterectomy was found to be 46 years, mean parity was 3. 157(58.36%) hysterectomies were performed through the abdominal route while 110(40.89%), by vaginal route. The most common indication for hysterectomy was AUB in 138(51.36%) cases, followed by pelvic prolapse in 103(38.28%) cases.

Conclusion: Calculating the proportion of hysterectomies performed at department will help to know demographic gynaecological health issues burden and in mapping out schemes to make affordable health care easily accessible to rural population.

Keywords: Gynecological malignancy, Hysterectomy, Pelvic organ prolapse.

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INTRODUCTION:

Hysterectomy is a surgical procedure to remove the uterus. It is widely used to treat a number of gynaecologic conditions. Hysterectomy is the second most commonly performed non-obstetric surgical procedure next to caesarean section all over the world. Indications of hysterectomy range from benign conditions like uterine fibroids, endometrial polyps, chronic pelvic pain, pelvic organ prolapse to malignancies of the genital tract.¹ For women undergoing hysterectomy it incurs a great financial burden & physical risk being a major surgery. Pelvic organ prolapse is a bulge or protrusion of pelvic organs & their associated vaginal segments into or through vagina. It results from attenuation of the supportive structures, whether by actual tears or “breaks” or by neuromuscular dysfunction or both.² The global prevalence of uterine prolapse is 2-20% and surgery for prolapse is 16.2%.³ The incidence of nulliparous prolapse in India constitutes 1.5-2% of genital prolapse, while it is 5-8% for women who have delivered 2 or more children.⁴ The **National Family Health Survey-4**, found that the prevalence of women undergoing hysterectomy for uterine prolapse between 15-49 years of age in India was 7-9% and those undergoing hysterectomy for non-prolapse indications was 91-93% out of which heavy menstrual bleeding was the most common indication (54%).⁵ Hysterectomy can be performed by different routes like abdominal, vaginal, laparoscopic as per clinical assesment. Vaginal hysterectomy consumes the least expenses in terms of hospital stay and operative consumables so is a cost-effective modality of approach for hysterectomy. This study will help to audit the route of hysterectomy and indications of hysterectomy

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Ethical approval: This study was conducted after getting approval from the institutional ethics committee.

Conflict of interest: The authors declare no conflict of interest. Ethical approval This study was conducted after getting approval from the institutional ethics committee.

at tertiary care institute. This will help to know the surgical consumable costing and requirement of surgical expertise to sustain the departmental surgical work. It will also help to know the demographic gynaecological issues in patients availing the gynaecology department facility at our tertiary care institute and hence to strengthen the services to comply the respective speciality health issues. The attitude of population in India is to opt for hysterectomy more easily compared to conservative approaches for management of menstrual problems as it is a permanent solution to their illness, also does not require frequent follow up visits to the clinic. This is further lucrative for women of low-income groups and those working on daily wages as they would not lose their livelihood over frequent hospital visits and admissions associated with the consequences of their disease conditions. But accessibility of quality healthcare is a major issue in most towns & villages all over India, hence routine surgical camps and government aided schemes are very important in increasing access to care so as to improve quality of life of these women.

AIM:

To audit total hysterectomies performed at a tertiary care rural hospital.

OBJECTIVES:

1. To calculate proportion of different types of hysterectomies conducted at the Obstetrics & Gynaecology Department in a tertiary care rural institute.
2. To classify the clinical indications of hysterectomy in tertiary care institute.
3. **Material & Methods** This is a hospital based descriptive study, carried out in the Gynaecology Department of a tertiary care rural hospital for a period of 12 months after approval from the institutional ethics committee. The study population consisted of patients admitted in Gynaecology ward & underwent hysterectomy for various indications. Total 269 hysterectomy done in a span of 12 months for various gynaecological indications. After fulfilment of the inclusion & exclusion criteria, patients were enrolled in the study. Researchers explained the purpose of the study & written consent was taken before data collection. Patient information was collected as per a structured questionnaire which included patient registration number, age, parity, indication for hysterectomy, route of hysterectomy. History and examination were carried out in standard gynaecological format. In patients diagnosed with prolapse, degree of prolapse is determined using the Baden-Walker classification.

Inclusion Criteria:

1. Women undergoing all Abdominal, Vaginal, Laparoscopic hysterectomies during the study period.
2. Women between the age group of 20-60 years.

Exclusion Criteria:

1. Hysterectomies done for obstetric indications
2. Hysterectomies done for a medical cause (patients on anti-coagulants) Information was compiled using MS Excel & mean, percentage & proportion analysed using SPSS software.

RESULTS

Table 1 & Figure 1: A total of 269 women underwent hysterectomy during the study period. Amongst them, 246(91.44%) women belonged to the age group 41-60 years, 23(8.55%) belonged to age group 20-40 years.

Table 1: Distribution of cases according to age

Age(in years)	Number of cases (Total = 269)	Percentage (%)
20-40	23	8.55
41-60	246	91.44

Table 2 shows that out of 103 hysterectomies done for pelvic organ prolapse, maximum cases i.e., 66(64.07%) had III degree prolapse, while 25(24.27%) cases had IV degree prolapse. None of the hysterectomies were done for I degree prolapse.

Figure 1: Distribution of cases according to age

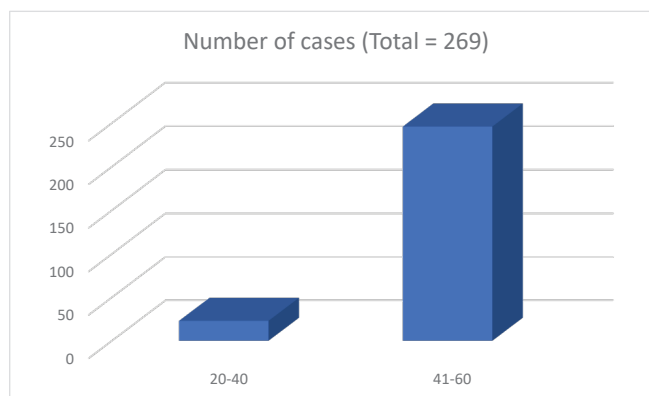


Table 2: Distribution of Degrees of prolapse

Degrees of Prolapse	Number of cases (Total = 103)	Percentage (%)
I	0	0
II	12	11.65
III	66	64.07
IV	25	24.27

Table 3 & Figure 2 shows that out of 269 hysterectomies, 138 cases were done for AUB, 103(38.28%) cases for pelvic organ prolapse, 17(6.31%) cases for fibroid uterus, 4 (1.48%) cases were done for adenomyosis & cervical polyp, & 3(1.11%) cases for ovarian mass.

Table 3: Indication for hysterectomy

Indication for hysterectomy	Number of cases	Percentage (%)
Abnormal uterine bleeding	138	51.30
Prolapse	103	38.28
Fibroid uterus	17	6.31
Cervical polyp	4	1.48
Adenomyosis	4	1.48
Ovarian mass	3	1.11

Figure 2: Number of cases

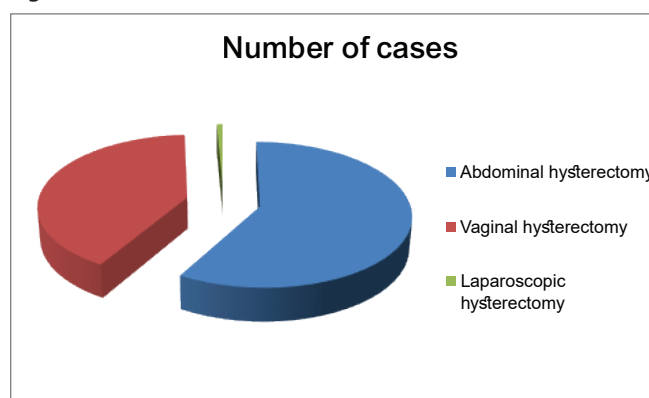
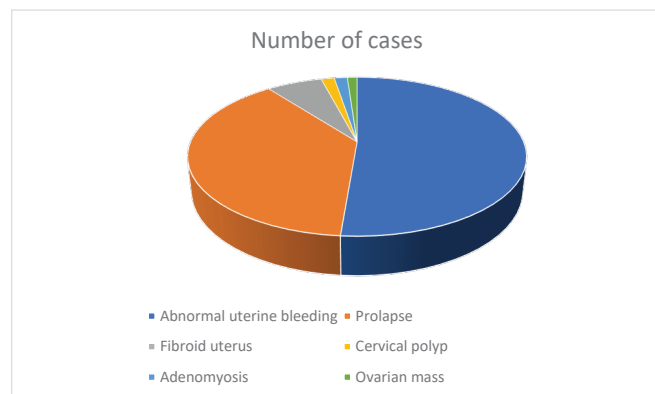


Table 4 & Figure 3 shows that among 269 hysterectomies, 157(58.36%) cases were performed via abdominal route, 110(40.89%) were done by vaginal route & only 2(0.74%) cases were done via laparoscopy.

Table 4: Route of hysterectomy

Route of hysterectomy	Number of cases	Percentage (%)
Abdominal hysterectomy	157	58.36
Vaginal hysterectomy	110	40.89
Laparoscopic hysterectomy	2	0.74

Figure 3: Number of cases



DISCUSSION

Hysterectomy is one of the most common gynaecological procedures performed all over the globe. The prevalence of hysterectomy differs across different countries probably due to different patient demographics, culture, uterine pathologies, and different management approach by treating gynaecologists. As demographic factors play a major role in the development of prolapse, correlation of these factors in other parts of India is necessary. Hence, we have compared results of our study with similar studies conducted in India.

In our study, a total of 269 hysterectomies were conducted during the study period, out of which 157(58.36%) were abdominal hysterectomies, 110(40.89%) cases were vaginal hysterectomy. In a study conducted by Kasinathan *et al*, it was observed that out of 234 hysterectomies which were performed, 108(46.15%) were by abdominal route & 126(53.84%) were done by vaginal route.⁶ In an audit of indications of hysterectomy done by Pandey *et al*, it was observed that out of 527 hysterectomies, 394(74.7%) were performed by abdominal route, 94(17.8%) by vaginal and 35(6.6%) by laparoscopic route.¹ In our study the mean age of women undergoing hysterectomy was 46 years, and 246(91.44%) hysterectomies were performed in the age group 41-60 years, and the mean parity was found to be 3. This was comparable to a study conducted by Meena *et al*, the peak age incidence of patients was 41-50 years.⁷ In a prospective study of 200 cases by Sucheta *et al*, 50% women belonged to 41-50 years.⁸ In our study, the most

common indication was found to be AUB in 138(51.3%) cases, followed by pelvic organ prolapse in 103 (38.28%) cases. In a study of 379 elective hysterectomies by Fatehpuriya *et al*, it was observed that the most common indication was leiomyoma in 197(51.9%) followed by prolapse in 134(35.3%) cases.⁹ Pandey *et al* found that the most common indication in abdominal approach was fibroid uterus (total 39.9% out of abdominal 52.7%, while in vaginal approach, it was uterovaginal prolapse (total 16.3% and out of vaginal 91.5%).¹ Kasinathan *et al*, in their study of 234 hysterectomies, observed that the most common indication was uterovaginal prolapse in 109 (46.5%) cases, followed by fibroid uterus in 80(34.18%) cases.⁶

CONCLUSION:

Calculating the proportion of hysterectomies performed at the department will help to know demographic gynaecological health issues burden and in mapping out schemes to make affordable health care easily accessible to rural population. It also helps to know the surgical expertise required to address the gynaecological health issues. It also helps to address preventable causes of hysterectomy and can help in future to strategize preventive measures. Pelvic organ prolapse is one of the most common causes of reproductive morbidity which can negatively impact the quality of life. Pelvic organ prolapse forms the second most common indication for hysterectomies done at our hospital. It is observed that the incidence of prolapse is shown to increase with advancing age, patients can be given counselled so as to increase their awareness regarding this condition & can be taught pelvic floor exercises as a preventive measure for prolapse. As prolapse can also be correlated to increased parity, it is important to encourage more institutional deliveries under trained staff. These strategies can help in reducing number of hysterectomies for pelvic organ prolapse and thus reducing the morbidity associated with it.

REFERENCES

- Pandey D, Sehgal K, Saxena A, et al. An audit of indications, complications, and justification of hysterectomies at a teaching hospital in India. *International Journal of Reproductive Medicine*. 2014; 2014:279273. DOI: 10.1155/2014/279273.
- Jonathan S Berek; Berek & Novak's Gynaecology, Fifteenth edition; 1603-1604.
- Mekonnen BD (2020) Prevalence and Factors Associated with Uterine Prolapse among Gynecologic Patients at University of Gondar Comprehensive Specialized Hospital, Northwest Ethiopia. *J Women's Health Care* 9:492. doi:10.35248/2167-0420.20.9.492
- Walker, G.J.A., Gunasekera, P. Pelvic organ prolapse and incontinence in developing countries: review of prevalence and risk factors. *IntUrogynecol J* 22, 127-135 (2011). <https://doi.org/10.1007/s00192-010-1215-0>

5. Desai S, Shukla A, Nambiar D, Ved R. Patterns of hysterectomy in India: a national and state-level analysis of the Fourth National Family Health Survey (2015–2016). *BJOG* 2019; 126 (S4): 72–80
6. Kasinathan A, Nagulapally H. A retrospective study on indications and histopathological analysis of non-oncological hysterectomies in a tertiary care hospital. *Int J Reprod Contracept Obstet Gynecol* 2020; 9:5050-4
7. Meena M, Urvashi, C.P Kachawaha. A clinical study of elective hysterectomies for benign lesions; *Int J Reprod Contracept Obstet Gynecol*. 2021 Jun;10(6): 2414-2419
8. Sucheta KL, Mallikarjuna M, Madhu KP, Arun BJ, Niranjana N; Hysterectomy: clinical profile, indications and postoperative complications; *Int J Reprod Contracept Obstet Gynecol*. 2016 Jul;5(7):2093-2096
9. Fatehpuriya DS, Verma L, Sharma S. Clinico-pathological study of hysterectomy in benign lesions: a study of 379 hysterectomies. *Int J Reprod Contracept Obstet Gynecol* 2017; 6:934-8

CHECKLIST FOR REVIEW

(A) First read-through	Your response
Is it clear what the authors want to communicate and the direction of the manuscript?	yes
Is it reporting original research or is it another type of article? How does this change your report?	Original research
What contribution does the article make to the field of study?	
Is the manuscript original?	yes
Is the overall study design and approach appropriate?	
Are you concerned about the language? Are revisions needed to make it possible to review?	no
Detailed review – Research articles	
If it's a trial, is it registered with CTRI/WHO? Is the Reg mentioned?	
(B) Title	
Does it express clearly what the manuscript is about?	yes
Does it highlight the importance of the study?	no
Does it contain any unnecessary description?	no
(C) Abstract	
Is it a short and clear summary of the aims, key methods, important findings and conclusions?	yes
Does it include enough information to stand alone?	yes
Does it contain unnecessary information?	no
Is it following word limit?	no
(D) Introduction	
Does it clearly summarize the current state of the topic?	no
Does it address the limitations of current knowledge in this field?	no
Does it clearly explain why the study was necessary?	no
Does it clearly define the aim of the study and is this consistent with the rest of the manuscript?	no
Is the research question clear and appropriate?	no
(E) Methods	
Are the study design and methods appropriate for the research question?	yes
Is there enough detail to repeat the experiments?	no
Is it clear how samples were collected or how participants were recruited?	no
Is there any potential bias in the sample or in the recruitment of participants?	No
Are the correct controls/ validation included?	Yes
Are any potential confounding factors considered?	n/a
Has any randomization been done correctly?	No
Is the time-frame of the study sufficient to see outcomes?	Yes
Is there sufficient power and appropriate statistics?	Yes
Do you have any ethical concerns?	No
(F) Results	
Are the results presented clearly and accurately?	Yes
Do the results presented match the methods?	yes
Have all the relevant data been included?	yes
Is there any risk of patients or participants being identified?	no
Is the data described in the text consistent with the data in the figures and tables?	yes
(G) Discussion and conclusion	
Do the authors logically explain the findings?	yes
Do the authors compare the findings with current findings in the research field?	yes

Are the implications of the findings for future research and potential applications discussed?	no
Are the conclusions supported by the data presented?	yes
Are any limitations of the study discussed?	no
Are any contradictory data discussed?	no
(H) Tables and figures	
Are data presented in a clear and appropriate manner?	yes
Is the presentation of tables and figures consistent with the description in text?	yes
Do the figure legends and table headings clearly explain what is shown?	ye
Do the figures and tables include measures of uncertainty, such as standard error or confidence intervals, where required as well as the sample size?	no
Do you have any concerns about the manipulation of data?	no
(I) References	
Are there any key references missing?	no
Do the authors cite the initial discoveries where suitable?	yes
Are there places where the authors cite a review but should cite the original paper?	no
Do the cited studies represent current knowledge?	yes
(J) Final checks – before you submit your report	
Have you given a brief summary of the article and highlighted the key messages?	yes
Have you given positive feedback as well as constructive criticism?	yes
Have you made it clear which of your concerns are major (significant points, essential for publication) or minor (smaller issues, may not be essential for publication)?	no
Are your concerns specific, with examples where possible?	no
Have you numbered your comments and referred to page/ line numbers in the article to make it easy for the authors to address your points?	no
Is your feedback constructive, and focused on the research?	hopefully
If you were the authors, would you understand how to improve the manuscript?	yes
If you were the Editor, would the comments be detailed enough to help you make a decision?	no
Have you checked the spelling and grammar in your report?	yes
Have you included your comments in the correct places in the online system – checking that any confidential comments for editors are in the right place – and have you answered all the questions?	yes

Source: <https://editorresources.taylorandfrancis.com/reviewer-guidelines/review-checklist/>

(K) Peer review of non-research articles

- Many of the same questions will be relevant to all articles. However, articles which do not present original research are unlikely to have a methods section and results but may be more focused on the discussion of a topic. Check the article type and journal requirements if you are unsure.
- Here are some questions to consider for some non-research article types.

(L) Systematic reviews

- Are the search terms and inclusion/ exclusion criteria clearly described?
- Are the search terms and criteria correct to ensure all the relevant articles are included?
- If a meta-analysis has been done, were previous studies combined appropriately?

(M) Case reports

- Does the diagnosis appear to be correct?
- Was the treatment reasonable for the diagnosis?
- Are the treatment and outcomes clearly described?
- As far as possible, is the patient anonymous?
- Are the conclusions reasonable and not attempting to generalize to wider population?

(N) Methodology articles

- Is the new method clearly described?
- Is it possible to replicate the new method?
- Is there a rationale for why the new method is needed?
- Is the new method compared to existing approaches?
- Usually there should not be any experimental results, other than to demonstrate the utility of the methods.

(O) Review articles

- Is there any content which has been previously presented in a review?
- Does it focus on recent advances in research?
- Is it a balanced and unbiased overview of current understanding?
- Are any recent or important references missing?
- Is it too focused on the author's own research?
- Is the interpretation and presentation of results of previous studies accurate and precise?
- Has it a valuable contribution to the research field?
- Is it understandable for non-expert readers?
- Opinion articles (also called Editorials or Commentaries)
- Does the article add to the discussion on a research topic?
- Is the opinion of the author well-argued?
- Is the opinion based on current knowledge, or if it makes a big leap from current knowledge then is this logical?
What supports the opinion presented?