Check for updates

OPEN ACCESS

DOI: 10.46903/gjms/16.04.1958

ORIGINAL ARTICLE

TYPES, TIME-TREND AND INDICATIONS OF HYSTERECTOMY

Fauzia Anbreen[1], Samina Qadir[2], Hira Naeem[3], Najma Farhat[1], Maria Ghafoor[1], Sualeh Hassan[4]

Departments of [1]Gynecology & Obstetrics and [2]Community Medicine, Gomal Medical College, D.I.Khan, [3]Departments of Gynecology & Obstetrics, Polyclinic Hospital, Islamabad and [4]Khyber Medical College, Peshawar, Pakistan

ABSTRACT

Background: The frequency of hysterectomy varies in same geographical area. The objectives of this study were to determine the types, time trend and indications of hysterectomy in our population.

Materials & Methods: This cross-sectional, study was conducted in the Department of Gynecology and Obstetrics, Gomal Medical College, D.I.Khan, Pakistan, from 1st January 2013 to 31st December 2016. A sample size of 571 was selected through consecutive technique. Inclusion criteria were all hysterectomies done for gynecological indications. Demographic variable was age groups. Research variables were type, time trend and indications for hysterectomy. All variables being categorical were expressed as frequency and percentages. 95% confidence interval for proportion were calculated. SPSS version 19 was used for statistical analysis.

Results: Out of 571 hysterectomies, 333(58.31 %) were abdominal and 238(41.68 %) were vaginal. Age-wise distribution of hysterectomies shows >61 is the modal age group. The hysterectomy frequency increased from 7% of total gynecological admission during 2013 to 17% of total gynecological admission in 2016. The indication for hysterectomy by type from 2013-2016 was menstrual disorders and uterine prolapse.

Conclusion: Trans abdominal hysterectomies were more common than vaginal hysterectomies. Most common age group for hysterectomy was older than 60 years. The indication for abdominal hysterectomy was menstrual disorders whereas the only indication for vaginal hysterectomy was uterine prolapse. Line diagram was showing an increase in hysterectomy frequency over time from 2013-16.

KEY WORD: Hysterectomy; Prolapsed Uterus; Fibroid.

This article may be cited as: Anbreen F, Qadir S, Naeem H, Farhat N, Ghafoor M, Hassan S. Types, time-trend and indications of hysterectomy. Gomal J Med Sci 2018 Oct-Dec;16 (4):92-6. https://doi.org/10.46903/gjms/16.04.1958

INTRODUCTION

Hysterectomy is the most common surgical procedure performed all over the world, next only to caeserean section. Hysterectomy is the removal of uterus. It is removed through abdominal route (TAH), vaginal route (VH), laproscopically or combined approach. It is done where medical treatment fails, not efficacious & when further child production is not desired.[1,2]

In the United States, hysterectomy rate significantly decreased to 1.9% per year between 1997 and 2005.[3] There are regional variations and & guess work includes gynecologist attitude & experience, patient's awareness and easy availability of alternative options. In England, 43667 abdominal hysterectomies were perform in 1999-2000 and 32528 in 2004-2005. So a decline occurred, due to accessibility of 2nd generation endometrial ablations, but during this 16 years period, no change occurred in vaginal hysterectomy. In England an average of 15919 vaginal hysterectomies are performed per year. The vaginal hysterectomy is mostly done for prolapse, since the prolapse is not treated by new menstrual technologies.[4] In the US, approximately 60000 hysterectomies are performed each year.[5]

The trends of hysterectomy have come under critical examination in recent years. The indications for the operations have been questioned as per the individual motives of the gynecological surgeons.[6] Such doubts are validated by observations such as there is a dramatic reduction in the number of hysterectomies in the Canadian province of Saskatchewan and marked variations in operation rates both within and between countries with similar population where there is no major difference in health regains.[7]

Corresponding Author:

Dr. Fauzia Anbreen
Associate Professor
Department of Gynecology and Obstetrics
Gomal Medical College, D.I.Khan, Pakistan
E-mail: drfauziaanbreenkundi@gmail.com

The rate of hysterectomy varies in different regions. The facilities are easily available in developed countries, even then there is six-fold difference and five-fold variation with in the same geographical zone, and among gynecologist within the same hospital. In UK 20% of women and in the US 37% of women had hysterectomy till the age of 60th years. So in the US life-time risk of having hysterectomy is 25%, while in Denmark 10.4% and further lower in India of 4.6%.[8]

One in three women in the United States & one in five women in the United Kingdom have hysterectomies done by the age of 60 years. International hysterectomy rates vary being highest in the US and lowest in Norway and Sweden.[9] Regarding time trend of hysterectomies in Pakistan, little is known about this phenomenon. But there is a dispute regarding its high rate. As endometrial ablative techniques are costly & are not readily and easily available in Pakistan so it is the only treatment option that is available.[10,11] The frequency of hysterectomy varies in same geographical area. The objectives of this study were to determine the types, time trend and indications of hysterectomy in our population.

MATERIALS AND METHODS

This cross-sectional, study was conducted in the Department of Gynecology and Obstetrics, Gomal Medical College, D.I.Khan, Pakistan, from 1st January 2013 to 31st December 2016. A sample size of 571 was selected through consecutive, non-probability technique using 4.10 as margin of error, 95% confidence level, 5 lakh population and 50% response distribution (Raosoft sample size calculator).[21]

Inclusion criteria were all hysterectomies done for gynecological indications. Exclusion criteria were hysterectomies during laparotomies and for obstetrical reasons. Data was collected on specially designed proforma.

Demographic variable was age groups; 12-40, 41-50, 51-60 and >61 years. Research variables were type of hysterectomy (trans abdominal, vaginal), time trend of hysterectomy and indication for hysterectomies. Indication was having attributes of menstrual disorders, fibroids, ovarian cyst, prolapse, adenomyosis, postmenopausal bleeding, mental retardation, carcinoma cervix, chronic pelvic pain, endometriosis, lost IUCD and pelvic inflammatory disease and others.

All variables being categorical were expressed as frequency and percentages. 95% confidence interval for proportion were calculated for estimation of parameter. SPSS version 19 was used for statistical analysis.

RESULTS

Out of 571 hysterectomies, 333 (58.31 %) were trans abdominal and 238 (41.68 %) were vaginal. (Table 1)

Age-wise distribution of hysterectomies is given in Table 2, showing 205 hysterectomies in >61 age group.

The hysterectomy frequency increased from 7% of total gynecological admission during 2013 to 17% of total gynecological admission in 2016. (Table 3)

The indication for hysterectomy by type from 2013-2016 is given in Table 4 and Figure 1.

Table 1: Types of hysterectomies from 2013-2016 in District Head Quarter Teaching Hospital, D.I.Khan, Pakistan (n=571).

S. No	Type of hysterectomy	Frequency	Percentage	95% CI of proportion
1	Abdominal	333	58.31 %	48.44 % - 68.16 %
2	Vaginal	238	41.68 %	31.84 % - 51.56 %
Total		571	100 %	--

Table 2: Age-wise distribution of hysterectomies from 2013-2016 in District Head Quarter Teaching Hospital, D.I.Khan, Pakistan (n=571).

S. No.	Age groups in years	Frequency of hysterectomy	Percentage	95% CI of proportion
1	12-40	65	11.38	4.98 – 17.8
2	41-50	111	19.43	11.63 – 27.2
3	51-60	190	33.27	23.9 – 42.7
4	> 61	205	35.90	26.3 – 45.5
Total		571	100	--

Table 3: Year-wise frequency of Hysterectomies from 2013-2016 in District Head Quarter Teaching Hospital, D.I.Khan, Pakistan (n=571).

S. No	Years	Total admissions	Frequency	Percentage	95% CI of proportion
1	2013	846	62	7.32	2.12 – 12.5
2	2014	847	61	7.20	2.0 – 12.4
3	2015	1382	220	15.91	8.5 – 23.3
4	2016	1330	228	17	9.5 – 24.5
Total		4405	571	12.96%	--

Table 4: Indications for hysterectomy by type from 2013-2016 in District Head Quarter Teaching Hospital, D.I.Khan, Pakistan (n=571).

S. No.	Indications	Abdominal Hysterectomy	Vaginal hysterectomy
1	Menstrual disorders	153	--
2	Fibroids	118	--
3	Ovarian cyst	16	--
4	Prolapse	15	238
5	Adenomysis	09	--
6	Post-menopausal bleeding	07	--
7	Mentally retarded	05	--
8	Pelvic inflammatory Disease	03	--
9	Carcinoma cervix	03	--
10	Chronic pelvic pain	02	--
11	Endometriosis	01	--
12	Lost IUCD	01	--
13	Others	0	--
Total		333 (58.32%)	238 (41.68%)

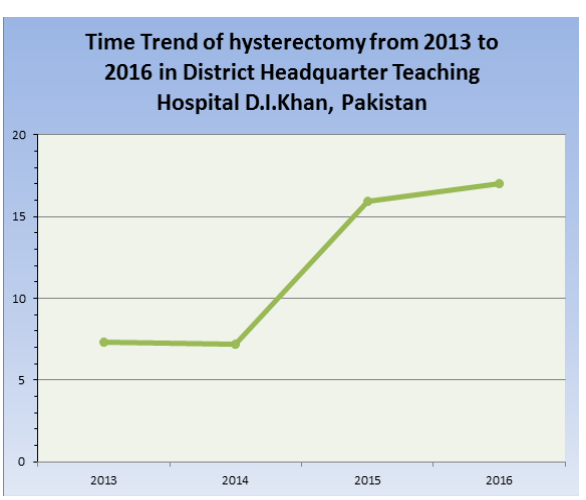

Fig 1: Time Trend of hysterectomy from 2013 to 2016 in District Headquarter Teaching Hospital D.I.Khan, Pakistan

DISCUSSION

In this study 333 (58.32%) were abdominal hysterectomy and 238 (41.68%) were vaginal hysterectomy. In Chen B. Study conducted at chines Air force Hospital 143 patients underwent TAH and 170 patients underwent VH.[12] In Anbreen F study 71 (58%) patients had TAH while 52 (42%) had VH[2].

In our study highest frequency of hysterectomy was observed in age groups above 61 years. A study conducted by Singh A at India, 1000 women were screened. The age was 25-43 years in 293 hysterectomy patients.[8,13,14]

The frequency of hysterectomy during 2013 -2014 was less 7% per year total gynecological admission in 2013. It raised to 15% per year admission in 2015 and 17% per year admission in 2016. So the frequency of hysterectomy is variable even with in the same hospital.

As for indications of hysterectomies are concerned 153 (26.82%) for TAH are done for menstrual disorders & 118 (35.4%) are done for fibroid. Western Australia has the highest hysterectomy rates in the world that is 20-23% due to patients demand, surgeon's choice and insurance policies.[15] Zaiba sher et al conducted a study at PAEC general hospital Islamabad from June 2006 to June 2009. Thirty five percent of the hysterectomies were done to treat menstrual disorders.[16]

A study conducted at Ayub Teaching Hospital Abbottabad, dysfunctional uterine bleeding (38%) was the major indication for hysterectomy followed by prolapsed uterus (22%).[17] At Mirpur Khas Menstrual disorders were responsible for 97 (67%)of the abdominal hysterectomy.[18] Similar results are seen at Hyderabad Sindh were 48 (37.79%) of TAH were done for fibroid & 45 (35.43%)[19] were done for menstrual problem.

In India the hysterectomy is done less, even if it is indicated because of the desire to complete family, fear of operation, silent females & high threshhold of tolerance. In India the incidence of hysterectomy is 7% in Sign A study while it is 10-20% in west. It has been criticized that they perform hysterectomy too rapidly.[8]

In this study 15 (5.9%) patients of prolapse were treated through abdominal hysterectomy and 238 (41.68%) were treated through VH. In Tanveer Q. Study all cases of prolapse 37 (74%) were treated through VH; none of them were treated through abdominal route.[20]

When annual rates of TAH and VH in England were compared from 1999-2015 it was observed that the rate of VH remained constant as new technology of endometrial ablation and Mirena had no role to treat prolapse.[4]

According to RCOG and NICE guidelines all the patients of menorrhagia should first be treated with Endometrial ablation and then by Mirena. If failed then opt for hysterectomy.[4]

CONCLUSION

Trans abdominal hysterectomies were more common than vaginal hysterectomies. Most common age group for hysterectomy was older than 60 years. The indication for abdominal hysterectomy was menstrual disorders whereas the only indication for vaginal hysterectomy was uterine prolapse. Line diagram was showing an increase in hysterectomy frequency over time from 2013-16.

REFERENCE

1. Petrie A, Sabin C. Medical statistical at a glance. 3rd edition. Great Britain: Alden Press, Oxford and Northampton 2000;130.
2. Anbreen F, Qadir S, Batool I, Bashir R. An audit of gynecological hysterectomy & utero-vaginal prolapse revealing need for safe mother hood. Gomal J Med Sci 2015;13(4):230-4.
3. Merrill RM. Hysterectomy surveillance in the United States, 1997 through 2005. Med Sci Monit 2008 Jan;14(1):24-3.
4. Rehman R, Gupta S, Manyonda I. Hystrectomy for benign gynaecological disease. Obstet Gynecol Reprod Med 2017;27(4):125-31. https://doi.org/10.1016/j.ogrm.2017.01.012
5. Wu, JM, Wechter MF, Geller EJ, Nguyen TV, Visco AG. Hystrectomy rates in the United States, 2003. Obstet Gynecol 2007;110;1091-5. https://doi.org/10.1097/01.AOG.0000285997.38553.4b
6. Daniel A. NSW health care and discretionary surgery statistics. Med J Aust 1985;142:251-3. https://doi.org/10.5694/j.1326-5377.1985.tb113323.x
7. Mcpherson K, Wennberg JE, Hovind OB, Clifford P. Small area variations in the use of common surgical procedures. An international comparison of new England, England and Norway. N Engl J Med 1982;307:1310-4. https://doi.org/10.1056/NEJM198211183072104
8. Singh A, Arora AK. Why hysterectomy rate lower in India? Ind J community Med 2008;33:176-7. https://doi.org/10.4103/0970-0218.42065
9. Jacobson G, Shaber R, Armstrong MA, Hung V. Hysterectomy rates for benign Indications. Obstet Gynecol 2006;107(6):1278-83. https://doi.org/10.1097/01.AOG.0000210640.86628.ff
10. Qamar un-Nisa, Habibullah STA, Hamilate Memon F, Memon Z. Hysterectomies an audit at a tertiary care Hospital. Professional Med J 2011: 18(1):46-50.
11. Majeed T, Adnan R, Mahmood Z, Mahmood H. Audit of gynecological Hysterectomies. Pak J Med Health Sci 2013;7(3):684-7.
12. Chen B, Ren DP, Li JX, Li CD. Comparison of vaginal and abdominal hysterectomy: A prospective non-randomized trial. Pak J Med Sci 2014;30:875-9. https://doi.org/10.12669/pjms.304.4436
13. Amin A, Ali A, Amin Z, Sani FN. Justification for hysterectomies and frequency of histo-pathological lesion at a teaching hospital in Peshawar. Pak J Med Sci 2013;29:170. https://doi.org/10.12669/pjms.291.2509
14. Kulkarni MM, Roges RG. Vaginal hysterectomy for benign disease without prolapse. Clin Obstet Gynecol 2010;53:5-16. https://doi.org/10.1097/GRF.0b013e3181cd3f0d
15. Pilsbury SK, Semmens JB, Hannond I, Block A. Persistent high rates of hysterectomy in Western Australia: a population based study of 83000 procedures over 23 years. BJOG 2006 Jul; 113(7):804-9. https://doi.org/10.1111/j.1471-0528.2006.00962.x
16. Iram N, Ashraf M, Sher Z, Majeed A. An analysis of complications and indications of hysterectomy between scarred and unscarred uterus. Ann Pak Inst Med Sci 2012;8 (3):192-5.

17. Bashir R, Perveen Z, Sultan R, Khan B. A two years audit of complication of hysterectomy at Ayub Teaching Hospital Abbottabad. J Ayub Med Coll Abbottabad 2005;17:47-9.
18. Khaskheli M, Baloch S. Abdominal hysterectomy: A common surgical procedure for benign gynecological disease. J Liaqat Uni Med Health Sci 2007:6(3) 94-7. https://doi.org/10.22442/jlumhs.07630124
19. Sheikh, Ahmad T, Fatima M, Zehra M. Hysterectomies: An audit at a tertiary care hospital. Professional Med J 2011:18:46-50.
20. Tanveeer Q, Fatima A, Shoukat M. Comparison of short term outcome between vaginal and abdominal hysterectomy. Annals PMC 2016;10 (1): 271-4.
21. Raosoft® sample size calculator. Seattle, WA, USA: Raosoft Inc.; 2004. Available at: http://www.raosoft.com/samplesize.html

CONFLICT OF INTEREST
Authors declare no conflict of interest.
GRANT SUPPORT AND FINANCIAL DISCLOSURE
None declared.

AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design:	FA, SQ
Acquisition, Analysis or Interpretation of Data:	FA, SQ, HN, NF, MG, SH
Manuscript Writing & Approval:	FA, SQ, HN, NF, MG, SH

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.