

ORIGINAL ARTICLE

THIRTY DAY RE-ADMISSION RATE AFTER SHORT STAY HYSTERECTOMY

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ABSTRACT

Background: Concept of short stay surgery is getting popular globally to maximize use of available health resources. The objective of the study was to determine thirty day readmission rate due to complications after short stay hysterectomy.

Material & Methods: This descriptive cross sectional study was conducted in Department of Obstetrics & Gynae from 1st January 2018 to 31 December 2018. Sample size was 72. Sampling technique was consecutive, non-probability. Patients having obstetrical hysterectomy or co-morbidities needing prolonged hospital stay were excluded. Data collecting tool was specially designed proforma. The observation for readmission was spread over a span of 30 days. Our socio-demographic variables were age in years, parity, residence and education. Age and parity were measured on numerical scale and expressed as mean and SD. Education and residence were categorical variables. Research variables were type of hysterectomy and re-admission due to complications measured on nominal scale. Categorical were analyzed as frequency and percentages using SPSS version 17.

Results: Out of 72 hysterectomies, 42(58.33%) were performed abdominally and 30(41.67%) were performed vaginally. In TAH group, 3(7.14%) patients and in VH group, 2(6.66%) patients had complications that required readmission. Pelvic Hematoma was found in 2(4.76%) patients of TAH group and in 1(3.3%) patients of VH group. Pelvic abscess was formed in VH group in 1(3.33%) of patients but not in TAH group. Urinary retention occurred in 1(2.38%) of TAH group but not in VH group.

Conclusion: Short stay hysterectomy has lower re-admission rate due to less number of complications, with a view to explore ways to increase bed availability in our setup.

KEY WORDS: Hysterectomy; Bed occupancy; Health resources.

This article may be cited as: Anbreen F, Qadir S, Naeem H, Farhat N, Ghafoor M, Waheed D. Thirty day re-admission rate after short stay hysterectomy. Gomal J Med Sci 2018;16:35-8. <https://doi.org/10.46903/gjms/16.02.1936>

INTRODUCTION

In the recent past there has been much focus in reducing unnecessary hospital stay following surgical procedures. There are many advantages of this practice including decreased financial burden on patient and hospital, shortening waiting lists of patients, increased bed availability, decreased chance of cross infection and patients feels more comfortable at home when prolonged hospital stay is not required from medical point of view. However to guarantee patient safety risk associated with short stay need to be addressed thoroughly.¹ Short stay surgery is

defined as surgery followed by overnight observation with discharge the following morning with typical stay duration of 23 hrs.² Short stay hospitalization is defined as in which a targeted procedure is done on a patient and patient is discharged as soon as the clinical condition is recovered. While in day case there is no need of an overnight stay.³ Day case surgery is where admission, surgery, observation and discharge are on same working day.⁴

Ontario Hospital Association published report about scoring of Hospital performance and number of short stay surgeries was used as an indicator of performance grading.⁵ Hysterectomy is the removal of uterus, it is done through abdominal, vaginal or laparoscopic route. It is definitive treatment for many indications like fibroid, PID, malignancy of the genital track, endometriosis and abnormal uterine bleeding.⁶ It is the most common gynecological procedure performed in world & its rate vary from 5.4/1000 women / year in US to 1.2/1000 women / year in Norway. In US every third woman has got her uterus removed till she approaches 60 years of age.⁷

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Date Submitted: 08-04-2019

Date Revised: 25-04-2019

Date Accepted: 22-05-2019

In India 15% of rural and 8% of Urban women had experienced hysterectomy till the young age of 37 years.⁸ Overall rate of hysterectomy varies between 6.1 to 8.6 per thousand women of all ages globally.

Although national statistics are not available regarding hysterectomy frequency but hysterectomy is most frequent gynecological major surgery in Pakistan in various local studies published. Traditionally these patients stay for 5 to 7 days in hospital and occupy beds. Tertiary care hospitals are overburdened in Pakistan. Population is growing by 37% and overall number of health facilities increased by 14%. Population / bed ratio is 1613 persons/ bed which is much larger as compared to Japan where it is 85 persons/bed, US 350 persons/ bed and India 1050 persons / bed.¹⁰ In 2018 one doctor was available for 6325 population (WHO). Basic Health Care lack specialized facilities so all patients needing specialized care are referred to big hospitals already over-burdened and with very limited bed availability.¹⁰

Gynecological oncology procedures are considered as nightmare but recent data have shown 48.5% patients were discharged satisfactorily after short-stay with no significant increase in complication rate.¹¹

Other studies also showed short stay surgery is safe for carefully selected eligible patients undergoing selected procedures, making efficient use of available beds and reduceing cost of medical care.¹²

In D.I.Khan most of the beds are occupied by obstetrical emergency patients and if gynae post-operative patients has un-necessary long hospital stay, this further complicates the problem of bed availability and optimum utilization of resources. Concept of day care and short stay surgery is getting momentum in developed countries and it need to be followed in low and middle income countries with limited resources and less organized health system. As trends in world after 1990 has changed to day case short-stay surgery, same trend here can solve to some extent our major problem of hospital bed deficiency. But there is knowledge gap regarding readmission rate of short stay surgery due to complications. It is important to find out to establish safety of short stay surgery.

The objective of the study was to determine thirty day readmission rate due to complications after short stay hysterectomy.

MATERIALS AND METHODS

This descriptive cross sectional study was conducted in Department of Gynaecology & Obstetrics from 1st January 2018 to 31 December 2018. Sample size was 72. Sampling technique was consecutive, non-probability. Inclusion criteria were those patients whose hysterectomy was performed for benign conditions and who had no perioperative complications. Patients and their relatives consented for short stay. Patients having, obstetrical hysterectomy or co-morbidities like diabe-

tes, previous surgeries hypertension, respiratory disease needing prolonged hospital stay were excluded. Data collecting tool was specially designed proforma. Data was collected from a private hospital of D.I.Khan. Pre-operative assessment was done. Detailed history taking, general physical exam, systemic examination and local examination were performed. Lab test were done including blood group with e RH factor, CBC, Random blood sugar, BT, CT, Urine R.E, HbSAG/ Anti HCV, serum creatinine, ultrasound. ECG. All patients were given pre-operative 1gm ceftriaxone. Operations were performed by the same surgeon under spinal Anesthesia using same standard techniques. Suturing material was vicryl No.1. No intra-operative complication occurred. All of them had un-eventful post opt day. All these were discharged post-operatively within 24 hours and were educated regarding symptoms & signs of possible complications. Patient and their family members were counseled about how to take care at home along with instructions to come for follow-up on day 7 or any time in case of complication. The observation for readmission was spread over a span of 30 days. Our socio-demographic variables were age in years, parity, residence and education. Age and parity were measured on numerical scale and expressed as mean and SD. Education and residence were categorical variables. Education had 3 attributes illiterate, matric and above matric. Residence had two attributes of rural and urban. Research variables were type of hysterectomy having two attributes of abdominal and vaginal and re-admission due to complications like pelvic haematoma, pelvic abscess, urinary retention and others measured on nominal scale. Categorical were analyzed as frequency and percentages using SPSS version 17.

RESULTS

Out of 72 hysterectomies, 42 (58.33%) were performed abdominally and 30 (41.67%) were performed vaginally. Mean age of Total Abdominal Hysterectomy (TAH) group was 45 ± 1.44 years and for Vaginal Hysterectomy was 55 ± 1.77 years. Mean parity in TAH group was 5 ± 0.16 and in VH group 8 ± 0.25 . In TAH group illiterate were 24 (57%), Matric were 15 (36%), above matric 3 (7%). In VH group the illiterate were 22 (73%), upto matric 6 (20%) and above matric 2 (7%).

In TAH group 30 (72%) belonged to Urban and 12 (28%) belonged to rural area in VH 28 (93%) belonged to urban and 2 (7%) belonged to rural area. Table No.1

Table No.1: Socio-demographic characteristics of the subjects undergoing short stay hysterectomies in private Hospital, D.I.Khan, Pakistan (n=72).

Variable	TAH (n=42)	VH (n=30)
Age in years (mean \pm SD)	47 ± 1.77	$55 \pm .16$
Parity (mean \pm SD)	5 ± 0.16	$8 \pm .257$

Thirty day re-admission rate after short stay hysterectomy.

Variable	TAH (n=42)	VH (n=30)
Education		
Illiterate	24 (57%)	22 (73%)
Matric	15 (36%)	6 (20%)
Above matric	3 (7%)	2 (7%)
Residence		
Urban	30 (72%)	28 (93%)
Rural	12 (28%)	2 (7%)

In TAH group 3 (7.14%) patients had complications requiring re-admission, in VH group 2 patients (6.66%) patients had complications that required re-admission. Pelvic Hematoma was found in 2 (4.76%) patients of TAH group and in 1 (3.3%) patients of VH group. Pelvic abscess was formed in VH group in 1 (3.33%) of patients. But not in TAH group. Urinary retention occurred in 1 (2.38%) of TAH group but not in VH group. There was no case of DVT or anesthesia and other complications. Table No.2

Table No.2: Type of complications requiring re-admissions with in thirty days in private hospital, D.I.Khan, Pakistan (n=72).

Variable	TAH (N=42)	VH N=30
Pelvic haematoma	2 (4.76%)	1 (3.33%)
Pelvic abscess	Nil	1 (3.33%)
Urinary retention	1 (2.38%)	Nil
Others	Nil	Nil
Total	3 (7.14%)	2 (6.66%)

DISCUSSION

The length of hospital stay in this study was less than 24 hours. In 1995-1996 it was not a practice to discharge the patient of hysterectomy before a week. In 1996-1997 only one patient (2%) was discharged on 4th post-operative day. The median post-operative stay was shortened from 7 to 5 or 3 days. In P.Reif study 79% of patients during 2011-2012 were discharged on 3rd post-operative day and 91% on 4th post-operative day. Because it is now internationally practiced to shorten the post-operative hospital stay not only in gynae department but in other surgical units also¹³. This short stay surgery has also been practiced in Europe.¹⁴

The mean age of TAH patients in this study was 45 years and for VH the mean age was 55 years. In P Reif et al Study the age of the Patients varied insignificantly with mean value of 48 years. Ottesen M conducted a study the median age of VH Patients were 69 years.¹⁵ According to Lemos P. Study and other previously conducted studies shows that older patients were more satisfied with health care as compared to younger ones.¹⁶

In this study 24 (57%) of TAH group and 22 (73%) of

VH group were illiterate & Matriculate in TAH group were 15 (36%) and 6(20%) in VH group. So the majority of the patients were having low academic qualifications. A study conducted by Lemos P. showed a low level of academic qualification.¹⁶

The parity in TAH group was 5 while in VH group it was 8. The party of sikandar R study was 6 for VH only.¹⁷ A study conducted by Anbreen F. Showed parity of 4 in TAH group and 9 in VH group.⁶

In this study 30 (72%) of the TAH group patients belonged to Urban and 12 (28%) belonged to rural area. In VH group 28 (93%) belonged to Urban and 2 (7%) belonged to rural area.

A study conducted in Southern India most of the hysterectomies were performed abdominally (75.5%) then vaginally (7.8%) and rest laproscopically (6.6%).¹⁸ In our study 58.33% hysterectomies were performed abdominally and 41.67% were performed vaginally.

In this study 3 (7.14%) patients in TAH group and 2 (6.66%) in VH group were re-admitted due to complications A study conducted by Hackman B et al only 3 (2.9%) required re- admission.¹⁹

According to Easton K study the policy of early discharge after Hysterectomy had increased G.P work-load. SO they stressed on patients information leaflet and telephone advice.²⁰ In Reiner I J study no complication due to early hospital discharge was noticed.²¹

According to Person C the most common complication after hysterectomy was infection. For TAH it was 10.5%. and for VH 13 %. In VALUE study the complication was 0.9% in TAH and 1.2% in VH.²¹⁻²⁴

Pelvic hematoma appeared in 2 (4.76%) of TAH and 1(3.3%) of VH patients In Sikandar R study post-operative bleeding appeared in 1(5%) patients of VH.¹⁷

In this study Urinary retention occurred in 1 (2.38%) of TAH group but not in VH group. While in Ottesen in study conducted at Denmark most frequent complication were urinary retention and urinary tract infection (12.2%).¹⁵

Limitation of this study is small sample size. Surgeries were performed by a single surgeon which may limit its generalization.

CONCLUSION

Short stay hysterectomy has lower re-admission rate due to less number of complications, with a view to explore ways to increase bed availability in our setup.

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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
Manuscript Writing & Approval:	FA, SQ, DW

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.



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