ORIGINAL ARTICLE

AN AUDIT OF GYNAECOLOGICAL HYSTERECTOMY AND UTEROVAGINAL PROLAPSE REVEALING A NEED FOR SAFE MOTHERHOOD

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ABSTRACT

Background: Hysterectomy is the major procedure performed abdominally/vaginally. Uterovaginal (UV) prolapse is preventable but still common indication for Vaginal Hysterectomy (VH). The aim of this study was to compare different aspects of abdominal and vaginal approach to hysterectomy and to find out frequency of prolapse.

Material & Methods: This cross sectional study was conducted at the department of obstetrics and gynaecology at DHQ Teaching Hospital, D.I.Khan. The study was conducted from January 2013 to December 2014. Sampling technique was purposive sampling. Sample size was 123. Information regarding socio-demographic characteristics was noted. Indication for surgery, type of hysterectomy and post-operative morbidity and mortality were our research variables. In patients with UV prolapse information about place of delivery and person who conducted delivery was also recorded. Data collecting tools were charts/ register. Data was analyzed by using percentage and frequency using SPSS.

Results: Within study period total gynecological admissions were 1693. 185 (11%) were major surgeries. 123 (66%) were hysterectomies. Average age was 50 years in VH and 52.5 years in Total Abdominal Hysterectomy (TAH). The mean parity was 9 in VH and 4 in TAH, 48 (92%) Patients of VH were illiterate. While in TAH 30 (42.2%) patients were illiterate.. Among indications prolapse was responsible for 44% of total hysterectomies and it was only indication for VH. Complication rate of VH was 5.8% and TAH was 5.6%.

Conclusion: Most common indication was UV prolapse and most frequent procedure was abdominal hysterectomy. UV prolapse is associated with large family size and home deliveries. Post-operative complications rate difference was in significant in the two procedures.

KEY WORDS: Hysterectomy; Prolapsed uterus; Fibroid.

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INTRODUCTION

In Gynecology hysterectomy is one of the major surgical procedure performed.[1] Hysterectomy stands for taking out uterus from a woman's body. Gynaecologist perform hysterectomy through different routes like abdominally, vaginally or laproscopically. Selection of route depends on surgeon's choice, why the surgery is being performed, type of disease and patient attributes.[2] Hysterectomy has worked successfully as an effective treatment option for many indications like fibroid, abnormal uterine bleeding, endometriosis, uterine prolapse, pelvic inflammatory disease and malignancies of genital tract. Most of diseases are benign that amounts to be 90% according to an estimate. Of all the hysterectomies performed abdominal route is more commonly used as compared to vaginal or laparoscopic route.[3] The value study showed that during the year 1994/1995 in the UK, 37.295 hysterectomies were performed, out of which 67% were performed abdominally, 30% vaginally and 3% as Laproscopically.[4] As hysterectomy is a procedure which is frequently performed, recent reports have used hysterectomy as a parameter to measure hospital efficacy and quality of care.

In Canada in 2001, 446 hysterectomies were performed per 100,000 women. In response to the

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consistent demand for this procedure, recent reports have identified hysterectomy as a key health care indicator used to measure and compare hospital performance. In particular, the Ontario Hospital Association has published reports showing association of (VH) Vaginal hysterectomy to total abdominal hysterectomy as a method of grading hospitals and gave more scores to those hospitals which performed more VH than TAH. Not only the ratio of these two procedures matter but also duration of stay of patient in hospital and complication rates are also used to grade hospital performance.[5]

Hysterectomy is usually done to improve the patient's conditions but it is also associated with complications that may even lead to death of patient. Almost every third woman has undergone hysterectomy by the time she reaches the age of 60. In USA, approximately 600,000 hysterectomies are performed every year.[6] An Indian study revealed that out that 7-8% of rural women and 5% of urban women had got their uterus removed for various obstetrical and gynecological reasons at by the time they reach 37 years of age on average.[7] A study revealed that frequency of hysterectomy was 7% among married women above 15 years of age.[8]

At Fatima Hospital, Baqai Medical University, Karachi, out of 509 gynecological procedures 184 hysterectomies were performed from November 2009 to November 2011.[9] As with any other procedures, hysterectomy is also associated with complications. The rates of complications range from 0.5% to 43%.[10] Incidence of UV prolapse varies in different countries and is directly related to family size and level of obstetric care. In Pakistan large family size and home deliveries by untrained staff are still common so is the UV prolapse. Generally it is responsible for 20% of major gynaecological surgeries.[11] It is important to know frequency of UV prolapse in D.I.Khan because it can be prevented and it will reflect utilization of safe motherhood strategic interventions. Although the overall frequency of genital prolapse in D.I.Khan population is difficult to ascertain. This is mainly because many women with this problem tend to live with it for as long as they can tolerate it and many women feel shy.

So the aim of this study is to compare abdominal and vaginal approaches to hysterectomy, regarding socio-demographic characteristics of women, the indications and complications of hysterectomies and to ascertain frequency of UV prolapse in D.I.Khan. Present study may provide a basis for a future audit of our Gynecological practice and for comparison of our practice with others. It will also indicate level of care provided to women of reproductive age group to make motherhood safe.. No such study has been carried out in this centre previously.

MATERIAL AND METHODS

This cross sectional study was conducted at the Department of Obstetrics and Gynaecology at District Headquarter Teaching Zanana Hospital, Dera Ismail Khan. The study period was from January 2013 to December 2014. Sampling technique was non-probability purposive sampling. Sample size was 123. The inclusion criterion was those patients who had hysterectomy either through abdominal or vaginal route. Obstetrical hysterectomies were excluded. Patients were divided into two groups those who had abdominal and those who had vaginal hysterectomy. Information regarding socio-demographic characteristics (age, parity, residence, type of work, educational status of the patient) was noted. The type of work was categorized into physically exerting and non physically exerting. Indication for surgery, type of hysterectomy and post operative morbidity and mortality were collected from gynecological ward admission register, patients files and from operation theater register. In pts with prolapse information regarding place of delivery and personnel who conducted delivery and their level of training was also recorded. Data was analyzed by using percentage and frequency. All data was entered into SPSS version 19. The difference in complication rate of two procedures will be tested by Chi-square test for any significance at 95% confidence interval level.

RESULTS

Within study period total gynecological admissions were 1693. Among these 185(11%) had major surgery. Out of which 123 (66%) patients underwent hysterectomy and were included in the study; 52 (42%) had VH and 71 (58%) had TAH.

Average age was 50 years in VH and 52.5 years in TAH. The mean parity was 9 in VH and 4 in TAH, 48 (92%) Patients of VH were illiterate, 4 (8%) of patients of VH had primary level education. None of them had secondary level of education. While in TAH 30 (42.2%) Patients were illiterate, 40 (56.3%) patients had primary education, 1 (1.4%) had secondary level education. UV prolapse was sole indication for VH. Out of 123 major surgeries, 54 patients had UV prolapse. 52 (96%) of them were operated vaginally and 2(3%) pts had TAH. This gives UV prolapse frequency of 29% of total major gynaecological surgeries and 44% of total hysterectomies undertaken. The majority (90%) of these were involved in physically exerting work. These 54 women with UV prolapse on the whole gave birth to 486 babies (28 wks completed) giving their mean parity of 9 babies per woman. Out of 486, 406(83.53%) deliveries were conducted by

Table 1: Socio-demographic characteristics who underwent hysterectomy.

No. of patients	Vaginal Hysterectomy (n=52)	Total Abdominal Hysterectomy (n=71)
Age	50 years	52.5 years
Parity	9	4
Educational Status		
None	48 (92%)	30 (42.2%)
Primary	4 (8%)	40 (56.3%)
Secondary	—	1 (1.4%)
Residence		
Urban	8(15.38%)	22 (31%)
Rural	44(84.61%)	49 (69%)
Occupation		
PhysicallyExerting	47 (90%)	21 (30%)
Non-physically exerting	5 (10%)	50 (70%)

Table 2: Obstetrical details in Uterovaginal (UV) prolapse patients indicating need for safe motherhood strategies.

Mean parity of UV Prolapse patients	9
Personnel who conducted delivery	
Local dais	406. (83. 53%)
Lady Health Visitor's	42. (8.64%)
Doctors	38 (7.82%)
Place of Delivery	
Home Delivery	448 (92.17%)
Hospital Delivery	38. (7.82%)

Table 3: Indications for surgery by type of hysterectomy.

Indications	Vaginal Hysterectomy (n= 52)	Total Abdominal Hysterectomy (n= 71)
Fibroid	—	23 (32%)
Abnormal uterine bleeding	—	18 (25%)
Adenomyosis	—	4 (5.6%)
Dysfunctional uterine bleed ing	—	11(15%)
Ovarian cyst	—	10 (14%)
Chronic pelvic pain	—	1 (1.4%)
PID*	—	1 (1.4%)
Mentally retarded		1 (1.4%)
Prolapse	52 (96%)	2 (3%)

Key: *Pelvic Inflammatory Disease

Table 4: Complications of hysterectomy.

Complications	Vaginal Hysterectomy (n=52)	Total Abdominal Hysterectomy (n=71)
Mortality	0	1
Septic wound	—	3
Vault hematoma	2	0
Pelvic abscess	1	0
Total	5.8%	5.6%

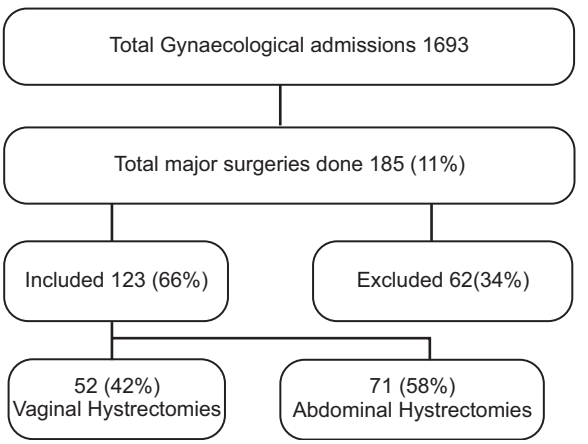

Figure 1: Flow chart of patients included in the study.

local Dais. LHVs conducted 42 (8.64%) deliveries and doctors conducted 38(7.82%) deliveries. Home deliveries were 419(86.21%) and hospital/clinic deliveries were 67(13.79%). Sole indication for VAH was UV prolapse.

While the indications for TAH were multiple including fibroid 23(32%), Abnormal uterine bleeding 18(25%), Adenomyosis 4 (5.6%), Dysfunctional uterine bleeding 11(15%), Ovarian cyst 10(14%), UV prolapse 2 (3%) and 1(1.4%) each for chronic pelvic pain, pelvic inflammatory disease (PID) and mentally retarded.

Complication rate of VH was 3 (5.8%) and in TAH was 4 (5.6%). One Patient of TAH died in OT because of anesthesia complication. Out of 71, 3(4%) of TAH patients had septic wound. Out of 52, 2 (3.8%) patients of VH had vault haematoma and 1 patient of VH had pelvic abscess. No case of VH was converted to laparotomy. The difference between the two procedures regarding complications was insignificance ($p < 0.05$).

DISCUSSION

If one looks at the parity it was 9 in VH and 4 in TAH. So the woman of UV prolapse were grand multiparous. Increased parity plays a major con-

tributing role in the development of UV prolapse. These women have un-supervised, difficult and prolonged childbirth at home. Local daisencourage them for pushing before full dilatation of cervix, so the genital supporting ligaments and fascia becomes weak.[12,13,14] A study conducted at UNTH Nigeria their mean parity was 5.2.[15] A study conducted at Fatima Hospital Baqai Medical University Karachi the mean parity was 6 with a range of 0 to 11. At Baqai Medical University high incidence was seen with parity more than 6.9 A study conducted at UPTH Nigeria, the patients were all parous and postmenopausal with 19 (90.5%) being grand multiparous and 2 patients having ten or more deliveries.[16] A study conducted at Muhammad Medical College, Mirpur Khas, Parity ranged from 4-10.[17] The parity was >5 at Mercy Teaching Hospital Peshawar.[14]

The percentage of prolapse in this study is 29% per total no of patients who underwent major gynecological surgeries and 44% of total hysterectomies undertaken. The institutional prevalence of uterovaginal prolapse in South-East Nigeria was 39.1 per 1000 gynecological patients, and 21 per 1000 gynecological admissions in Neewi and Enugu, South-East Nigeria.[13,18] A study conducted by Okonkwo showed 32.3% of pelvic reconstructive surgery in Nigerian woman.[13]

Educational status was less in VH as compared to TAH. No education at all 48 (92%) in VH and 30 (42%) in TAH. Primary education 4 in VH and 40 (56%) in TAH. A study conducted at UPTH Nigeria over three quarter (76.2%) of the patients had no formal education and none had tertiary level of education.[16] But Nigerian study was conducted only for prolapse while our study have included both VH and TAH.

Out of VH 8 (15%) patients belonged to urban area and 49(69%) patients belonged to rural area. 47(90%) women who underwent VH were physically exerting. Non-physically exerting in VH group were 5 (10%) and in TAH 50(70%). A study conducted at UPTH Nigeria showed that a greater proportion (76.2%) of the women were engaged in physically exerting occupation that predisposed them to prolonged periods of raised intra-abdominal pressure. They were mainly from the IKwerre (33.3%) Ibo (19%) and Etche (14.3%) tribes located at the upland area of rivers state of Nigeria and lesser proportion from the Riverine area. The inhabitants of the upland area were usually engaged in physically exerting occupations.[16] Further studies looking at the role of race and genetics in development of U-V prolapse are recommended and advocated for education seems to confer protective effect on the development of U.V. prolapse. In UNTH Nigerian study 42% of women were formers and lifted heavy objects for years which were contributing to the development of this condition. Overall 90% of the patients had no formal education or at best primary level of education. While the remaining had secondary level of education and no-body with tertiary level of education presented with U-V prolapse.[18] The likely explanation for this effect is that the educated women are less likely to have large family size, they are more likely to have antenatal care and supervised hospital delivery, they are better nourished and less likely to be subjected to physically exerting occupation.

In this study 52 (42%) were VH and 71 (58%) were TAH. A study conducted in Southern India most of the hysterectomies were performed abdominally (75.5%) followed by vaginally (17.8%) and laparoscopic (6.6%).[2] In this study VH was performed only for 3rd degree prolapse and rest of all other diseases were operated through abdominal route. While a study conducted at Air Force Hospital China the VH was successfully performed in patients whose uterus was 8-16 weeks size.[19] At Mercy Teaching Hospital most hysterectomies were carried out abdominally rather than vaginally, 52% versus 33% in part because fewer patients presented with prolapse.[14] This is similar to the findings of the study done by Fayaz S.[12] The leading indications for TAH in this study was fibroid 23(32%) followed by abnormal uterine bleeding 18 (25%). Dysfunctional uterine bleeding 11 (15%). Adenomyosis 4 (5.6%). Ovarian cyst 10 (14%), chronic pelvic pain, PID and mentally retarded 1 each (1.4%). 2(3%) patients of prolapse were treated through abdominal route and is comparable to a study by Parveen S and at Bashir R et al dysfunctional uterine bleeding (38%) was the major indications of hysterectomy. Followed by prolapse 22%.[1,9] A study conducted at Mirpur Khas showed that common indication for hysterectomy was excessive menstrual blood loss 97(67%). Most common operative diagnosis was fibroid 44 (33%) and DUB 14 (12%).[17]

In Southern India most common indication in abdominal approach was fibroid uterus (total 39.9% and out of abdominal 52.7%) while in vaginal it was uterovaginal prolapse (total 16.3% and out of vaginal 91.5%).[2] In present study complication rate of VH was 5.8% and in TAH 5.6%. In VALUE study it is 0.9% in TAH and 1.2% in VH.[4] At Ayub Teaching Hospital total complication rate was 14%.[1] The study conducted at Mercy Teaching Hospital, Peshawar showed fever and urinary retention was greater following abdominal rather than VH, while urinary tract infection was greater following VH rather than TAH (P=0.370).[14] A study conducted in Southern India had a complication rate of 8.5%. TAH had a complication rate

of 10.9% as compared to 2.1% in VH.[2] VH had less morbidity as compared to TAH and is comparable to Parveen S study.[9] In our study 2 patients of VH had vault hematoma and one had pelvic abscess. One patient of TAH had mortality due to anesthetic complication and 3 patients had septic wound. This is similar to study done by Fayaz S.[12]

The limitations of this study showed this audit process relied entirely on chart documentation, information may have been missed or in correct as a result of improper or absent documentation so next time this needs to be addressed.

CONCLUSION

The most common indication for Hysterectomy in our study was prolapse and the most frequent procedure was abdominal hysterectomy. Uterovaginal prolapse was frequent in grand multiparous women, majority of whom had unsupervised home deliveries and were uneducated. The difference between the postoperative complications was insignificant between Vaginal Hysterectomy and total abdominal hysterectomy.

There is a need to implement safe motherhood strategies as recommended by WHO like providing family planning services, raising awareness about and provision of antenatal care, safe and clean delivery service and essential obstetric care by trained personnel at all levels of health care. This will help in reducing frequency of prolapse. Above all education of women is important as educated women are more likely to use health/family planning services.

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CONFLICT OF INTEREST
Authors declare no conflict of interest.
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None declared.