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Short Communication

Comparison of hospital stay duration following total abdominal hysterectomy for benign disorders in private and general hospitals in Northern Iran (Rasht)

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The objective of this study is to present the current data on hospital stay duration after hysterectomy for benign disorders and to compare this data in private with general hospitals in Rasht, Northen Iran. This is a cross-sectional study of all admissions for abdominal hysterectomies for benign conditions in general and private hospitals in Rasht during a six month-period. Fisher exact and paired t-test and Mann-Whitney tests were used for comparisons. Out of 861 patients, 521 were from general and 340 from private hospitals. The mean duration of total hospital stay in the private setting was significantly shorter than that of the general hospitals (P < 0.05). The postoperative complications after discharge were not significantly different across the groups. It might be rational to reduce the duration of hospital stays to the level of private setting in the study region, since this seems not to cause any increase in post-hysterectomy morbidity.

Key words: Total abdominal hysterectomy, hospital stay duration, private and general hospital.

INTRODUCTION

Hysterectomy for benign conditions is one of the most common surgeries performed in gynecology. In fact, it the most common surgery only preceded with cesarean section. In 1992 the mean duration of post surgery hospitalization was 4.5 days (Nezhat et al., 1992; Benrubi, 1988). Although the trend for post-hysterectomy hospital stay has been reduced in developed countries, the figures remain constant in Iran basically because of lack of data and adherences to traditional outdate citations in textbooks.

In l965, there were 426,000 hysterectomies performed in the United States, with an average length of hospital stay of 12.2 days. This number reached its peak in 1985, when 724,000 procedures were reported, with the length of stay decreasing to 9.4 days. The number of hysterectomies performed in the United States declined to 544,000 in 1991, with an average length of stay of 4.5 days. Of these 544,000 hysterectomies, 408,000 (75%) were performed abdominally, and 136,000 (25%) vaginally (U. S. Department of Health and Human Services, Public Health Services, Centers for Disease Control, 1991; Pokras, 1989). However, by 1998, the number of hysterectomies had increased to more than 600,000 (Keshavarz, 1994-1998). As of November 2011 among 64503205 population in Iran 146422 hysterectomies were performed (RightDiagnosis.com/statistics on hysterectomy by countries/November 2011).

The indications for hysterectomy are numerous. In virtually all studies, uterine leiomyomas are consistently the leading indication for hysterectomy. As expected, the indications differ with the patient's age (Gambone and Reifer, 1990). For instance, whereas pelvic support defects account for 16% of all hysterectomies, this diagnosis is responsible for more than 33% of hysterictomies in women older than 55 years of age (Berek, 2007). Table 1 summarizes the indications for abdominal hysterectomy (Rock et al., 2008).

The complications of hysterectomy can be classified as primary outcomes such as return to normal activity, intraoperative visceral injury including urinary tract, bowel and vascular injuries, and major long-term complications such as fistula formation, urinary dysfunction, sexual dysfunction, chronic pelvic pain, bowel dysfunction, and pelvic prolapse. Secondary outcomes include operation time, significant bleeding, unintended laparotomy, and increased hospital stay (Johnson et al., 2006). Therefore,

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Table 1. Indications for Hysterectomy (Berek, 2007).

Benign disease	Malignant disease
Abnormal bleeding	Cervical intraepithelial neoplasm
Leiomyoma	
Adenomyosis	Invasive cervical cancer
Endometriosis	Atypical endometrial hyperplasia
Pelvic organ prolapse	Endometrial cancer
Pelvic inflammatory disease	Ovarian cancer
	Fallopian tube cancer
Chronic pelvic pain	Gestational trophoblastic tumors
Pregnancy-related conditions	

Table 2. Comparison of hospital stays of patients admitted for hysterectomy for benign conditions in private as well as general hospitals.

Hospital stay	General hospital n = 521	Private hospitals n =340	P-value
Total hospital stays	4.85 (1.55)	2.40 (0.9)	0.001
Pre operative stay	1.37 (1.17)	0.68 (0.63)	0.001
Post operative stay	3.54 (1.54)	1.71 (0.57)	0.001

Data are presented as mean and standard deviations (within parentheses). P-values were calculated using Mann-Whitney U-test.

the duration of hospital stay accounts for secondary indirect morbidity related to hysterectomy.

Within this background, our objective was to present the current data on hospital stay duration after hysterectomy for benign disorders and to compare this data in private with general hospitals in Rasht, which is located in northwestern Iran and has about 500,000 inner city population.

MATERIALS AND METHODS

This was a cross-sectional study ~~of~~ on all admissions for abdominal hysterectomies for benign conditions in general and private hospitals in Rasht within 6 months from may 2010 to December 2009. Fisher exact test was used for nominal variables and paired t-test and Mann-Whitney test for numerical variables using Statistical Package for the Social Sciences (SPSS) software version 16.

RESULTS

From a total of 861 patients 521 were from general hospitals and 340 from private hospitals. As shown in Table 2, the mean duration of total hospital stays in the private setting was significantly shorter than that of the general hospital ($P < 0.05$). The postoperative complications after the discharge from the hospitals were not significantly different in the two groups.

DISCUSSION

Hospital stay was significantly shorter for women who were in private hospitals (weighted mean difference 1.83 days) (P value < 0.001). There were no significant differences between general and private hospitals in terms of the need for blood transfusion (mean difference drop in haemoglobin [(0.55 g/l (0.28 g)], and no evidence of a significant difference between surgical approaches for occurrence of pelvic hematoma, vaginal cuff infection, urinary tract infection, chest infection, or thrombembolic events.

Recent data (Gambone and Reifer, 1990) indicate that the length of postoperative hospitalization has decreased dramatically in the last 20 years. Although it was common in the past for women to remain in the hospital for 7 to 10 days after abdominal hysterectomy, most patients are now discharged home in 3 or 4 days. This trend toward a shorter hospital stay requires better patient education and a reasonable home environment to which the patient can be safely and comfortably discharged. The complications can be reduced if the care providers do not lose touch with the patient after the discharge and carefully evaluate the patient before discharge and resist pressure from insurance companies and hospital administrators when the patient's condition indicates that she is not suitable for an early discharge. The patient and her family must be instructed on proper care. Can she take a bath? Can she

go up and down the stairs? Can she pick up her grandchild? How soon can she drive a car? A printed set of instructions for home care as well as answers to frequently asked questions are good ideas. Liberal use of home visiting nurses is also recommended, especially in older or more debilitated patients or in those whose home situation may be less than ideal.

Conclusion

The present general policy in our region of keeping post-surgery stay to 4 to 5 days is outdated according to previous data. Our results also support feasibility of shorter hospital stays following abdominal hysterectomies performed in Iran, since this seems not to cause significant differences in post-hysterectomy complications.

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