Histopathological analysis of uterus and appendages following total abdominal hysterectomy

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Abstract

Background: Hysterectomy is the most commonly performed gynecological surgical procedure. Histopathological examination helps in justifying the indications to perform this major surgery and is of utmost important in patients with genital cancer. This study was aimed at histopathological analysis of uterus and appendages following total abdominal hysterectomy. **Material and Methods:** A total of 110 cases of total abdominal hysterectomies conducted over a period of one year and histopathological analyses of uterus and appendages was done. **Results:** The age group of 41-50 years was the commonest age group (58%) undergoing the surgery. The most common clinical presentation was excessive irregular or frequent bleeding problems 68 (61.8%) followed by pain abdomen 32 (29.1%).On Histopathological examination, the commonest pathology was found to be Leiomyoma in 49.1% (n=54) followed by Adenomyosis (25.45%).The clinical diagnosis correlated well with histopathological diagnosis. **Discussion:** Histopathological analysis of the hysterectomy specimens should be a mandatory procedure, even if the gross appearance is normal. It also provides a correlation with the clinical and preoperative diagnosis and leads to appropriate management in the postoperative period. **Key Words:** Abdominal hysterectomy, histopathology, leiomyoma.

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INTRODUCTION

Hysterectomy is the most commonly performed gynecological surgical procedure. The vast majority of these procedures are still performed via an abdominal approach (64%) with vaginal (22%) and laparoscopic (14%) approaches being less common¹. Although laparoscopic hysterectomy has certain advantages such as short- term hospital stay and recovery time over abdominal hysterectomy these techniques are not without risks and are associated with more complications like bladder and ureteric injuriesthan abdominal operations². Moreover, these are more expensive and time-consuming

than abdominal or vaginal hysterectomy². Fibroids are the most common indication (39%) cited for performance of hysterectomy³. It is also an effective treatment option for many conditions like abnormal uterine bleeding, endometriosis, adenomyosis, uterine prolapse, pelvic inflammatory disease and cancer of reproductive organ when other treatment options are contraindicated or have failed, or if the woman no longer wishes to retain her menstrual and reproductive function. Histopathological examination is of utmost important in patients with genital cancer, where the adjuvant treatment is dependent upon the grade and extent of the invasion of the disease. Some of the patients may be suspected of having a malignancy on pre-operative assessment, histopathological examination may help in ruling out this suspicion. The diagnosis of adenomyosis is established only by histopathological examination, while DUB is a diagnosis of exclusion. Histopathological analysis of the hysterectomy specimens is mandatory for diagnostic purposes and to assess the pattern of lesions common in the uterus and appendages in a particular population. Hence, this study was aimed at histopathological analysis of uterus and appendages following total abdominal hysterectomy.

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MATERIAL AND METHODS

This retrospective study included a total of 110 cases of total abdominal hysterectomies conducted over a period of one year in a department of obstetrics and gynecology at a tertiary care hospital. All hysterectomy specimens were fixed in 10% buffered formalin, paraffin embedded and 4-5 μ m thick sections were cut and stained withHematoxylin & Eosin. Special stains were used as and when required. Brief clinical data with respect to age, parity, clinical manifestation and clinical diagnosis was obtained. Only one dominant diagnosis was considered and documented as the indication for the procedure. Histopathology reports were analyzed and compared with the indications of surgery to draw various informative conclusions.

RESULTS

Theage group of patientsranged from 30-65 years with mean age of 44.5 years. The age group of 41-50 years was the commonest age group (58%) undergoing the surgery. Most of them (94%) were multiparous (Table 1).

Table 1: Demographic data of the patients		
Demographic data	No. of patients (%)	
Age group (yrs)		
<31	04 (3.63%)	
31-40	26(23.63%)	
41-50	62 (56.36%)	
51-60	11 (10%)	
>60	07 (6.36%)	
Parity		
0	02 (1.81%)	
1	07(6.36%)	
2-3	72(65.45%)	
>3	29(26.36%)	

The most common clinical presentation was excessive irregular or frequent bleeding problems 68 (61.8%) followed by pain abdomen 32 (29.1%), mass descending per vaginum 3 (2.7%), backache 5 (4.5%) and white discharge 2 (1.8%). Most common indication for hysterectomy was leiomyomauterus in53 (48.2%) cases followed by dysfunctional uterine bleeding in26 (23.6%) women (Table 2).

Table 2: Distribution according to indication for hysterectomy

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Clinical diagnosis	Cases	Percentage
Leiomyoma uterus	53	48.18%
Dysfunctional uterine bleeding	26	23.63%
Postmenopausal bleeding	3	2.72%
Ovarian cyst	6	5.45%
PID	4	3.63%
Ovarian mass	9	8.18%
Adenomyosis	7	6.36%
Endometrial hyperplasia	2	1.81%

On Histopathological examination, the commonest pathology was found to be Leiomyoma in 49.1% (n=54). Adenomyosis (25.45%) was detected as second most common pathology on histopathological examination followed by fibroid withadenomyosis 7 (6.36%) (Table 3). The clinical diagnosis correlated well with histopathological diagnosis.

Table 3: Histopathological diagnosis of cases			
Histopathological report	No. of cases	Percentage	
Leiomyoma	54	49.1%	
Adenomyosis	28	25.45%	
Fibroid withAdenomyosis	7	6.36%	
Ovarian cyst	6	5.45%	
Endometritis	5	4.54%	
Endometrial hyperplasia	4	3.63%	
Ovarian tumour	4	3.63%	
Endometrial adenocarcinoma	2	1.81%	

DISCUSSION

Hysterectomy is the most common gynecological surgery done in the females worldwide. Histopathological analysis is mandatory to evaluate the appropriateness of the hysterectomy. In present study, the commonest age group undergoing Abdominal hysterectomies was found to be 41-50 years in our study. G Gupta et al^4 , Ramachandran T et al^5 and Jha R et al^6 also observed the similar findings in their study. Most common indication for hysterectomy in our study was leiomyoma uterus (48.18%) and dysfunctional uterine bleeding (23.63%). In a study by Shergill SK et al^7 the commonest indication was fibroid (34%), followed by DUB (26%). Adelusola KA *et al*⁸ found fibroid as a most common indication in 48% cases. Jha R et al^6 found that leiomyoma was the indication in 24.9%, ovarian tumour in 14.9% and DUB in 7.7% of the cases. Leiomyoma was diagnosed clinically in 48.18% cases which was confirmed in histopathological examination in all cases. Leiomyomas are benign uterine tumours which are commonly seen in women of reproductive age group and commonly present with increased menstrual bleeding which is due to increased vascularity, endometrial surface and altered uterine contractility and usually do not respond to hormonal therapy^{9,10}. Diagnosis of dysfunctional uterine bleeding was made in 23.63% cases. only 8.2% had histopathological finding consistent with the diagnosis of DUB. Many previous studies also missed the actual diagnosis of DUB pre-operatively¹¹⁻¹³. This result emphasizes the fact the pre-operative diagnosis of DUB should be made only after comprehensive and necessary investigations are done. All the preoperative diagnoses of fibroid cases were confirmed on histopathology. No significant pathology was detected in 7.61 % patients undergoing hysterectomy. To conclude, histopathological

analysis of the hysterectomy specimens should be a mandatory procedure, even if the gross appearance is normal, as few lesions are found to be the pure incidental finding. It also provides a correlation with the clinical and preoperative diagnosis and leads to appropriate management in the postoperative period.

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