

Audit of histopathological specimens of laparoscopic hysterectomy at Noble's hospital, IOM

Abstract

Objective: It aimed to determine the incidence of different pathology among the hysterectomy specimens and to correlate that with the clinical picture of patients' presentation.

Design: A retrospective study, it is the first audit of histopathological findings of laparoscopic hysterectomy specimens at Noble's Hospital.

Methods: It included 101 consequent specimens of laparoscopic hysterectomies done at the department of Obstetrics and Gynaecology, Noble's hospital between 2017 and 2020. The clinical picture of patients and the histopathological findings of samples were recorded and analysed. The histopathological diagnosis divided the specimens into seven groups, no pathology, adenomyosis, adenomyosis and leiomyoma, leiomyoma, adenomyosis and endometriosis, endometriosis and malignancy. The clinical picture included all types of bleeding as menorrhagia, post coital bleeding, intermenstrual bleeding and perimenopausal bleeding, all types of pain as dyspareunia, dysmenorrhea, lower abdominal pain and colicky pain. Histopathological findings include gross picture and microscopic analysis of endometrium and myometrium as well as the uterine weight.

Results: Adenomyosis alone or with other pathology was the commonest finding (54.5%) while adenomyosis as a sole pathology was found in 22.8%. It was significantly higher than figures reported from the UK and worldwide. Incidence of fibroid as a sole pathology or in combination with other pathology was 44.6%, this was compatible with results reported before. The pain was not associated with adenomyosis in this study. The bleeding was the presenting symptom of both adenomyosis and fibroids.

Conclusion: The higher incidence of adenomyosis among this specimen and the absence of pain as a presenting symptom may be a genuine finding but most probably indicate the specimen included a larger number of mild and early presentations. It will be useful to do a prospective study of a larger number to correlate the degree of the invasion of the adenomyosis to the myometrium to the clinical picture.

Keywords: laparoscopic, pathology, adenomyosis, leiomyoma, endometriosis, malignancy

Volume 12 Issue 1 - 2023

Moustafa K Eissa, Tarun Ghosh, Mohie El-Khadem

Noble's Hospital, Isle of Man

Correspondence: Moustafa K Eissa, MD FRCOG, Noble's Hospital, Isle of Man, Email mosteiss@hotmail.com

Received: March 12, 2023 | **Published:** April 20, 2023

Introduction

Hysterectomy is the second most frequently performed major surgical procedure in females all over the world after caesarean section.¹ The most common indications for which hysterectomy is being done are dysfunctional or abnormal uterine bleeding, uterine fibroids, uterine prolapse, endometriosis and adenomyosis.² The increase in the number of hysterectomies may be attributed to prophylaxis against uterine cancer, mild genital prolapse, premenopausal menorrhagia.³ Laparoscopic hysterectomy (LH) is an alternative to abdominal hysterectomy. The first LH was performed in January 1988 by Harry Reich in Pennsylvania.⁴ Most hysterectomies by laparotomy can be avoided by laparoscopic approach. A laparoscopic hysterectomy offers significant advantages over traditional surgery, including: Faster recovery. Because laparoscopic surgery uses smaller incisions, patients typically have less pain, less bleeding, and reduced risk of infection, enabling them to return to work or normal activities more quickly. This study is a retrospective study of a correlation between clinical picture and histopathological findings of laparoscopic hysterectomy specimens. It is the first study of such nature at Noble's hospital since introduction of LH in year 2010.

Material and methods

This retrospective study was designed to correlate clinical diagnosis of indications of hysterectomy with subsequent

histopathological report/diagnosis. The study was conducted at the department of Obstetrics and Gynaecology, Noble's hospital during the period 2017 to 2020. It included 101 subsequent hysterectomy specimens. There were no exclusion criteria, so the incidence of different pathology is accurate. The histopathological diagnosis divided the specimens into seven groups, no pathology, adenomyosis, adenomyosis and leiomyoma, leiomyoma, adenomyosis and endometriosis, endometriosis and malignancy. The clinical picture included all types of bleeding as menorrhagia, post coital bleeding, intermenstrual bleeding and perimenopausal bleeding, all types of pain as dyspareunia, dysmenorrhea, lower abdominal pain and colicky pain. Histopathological findings include gross picture and microscopic analysis of endometrium and myometrium as well as the uterine weight. All data were collected from patients' record while their identity was anonymous.

Results

The number of cases proved to have adenomyosis either alone or with other pathology as fibroid or endometriosis was 55 out of 101 representing 54.5%. Adenomyosis as a sole pathology was in 23 cases (22.8%). Fibroid either as sole pathology or in combination with adenomyosis were 45 (44.6%) while fibroid alone were 16 (15.8%). Specimens that showed no particular pathology were 24 (23.8%). In the comparison of the group of adenomyosis and fibroid to the no pathology group, the two groups were comparable regarding the

age and parity. There was no significant difference between the two groups regarding the pain or the occurrence of chronic cervicitis, but there was a significant difference regarding the bleeding Table 1 and Figure 1 as a presenting symptom. The weight of the uterus was extremely higher in the pathological group Table 2. The endometriosis group was comparable with the no pathology group regarding age and parity, the two groups were compatible. There was no significant difference between the two groups regarding the associated symptoms as pain and bleeding nor occurrence of chronic cervicitis and weight of the uterus. In the leiomyoma group, it was comparable with the no pathology group regarding age and parity. Pain was not an associated symptom nor occurrence of chronic cervicitis, while bleeding was

significantly higher than no pathology group Table 3 and Figure 2 as well as the weight of the uterus Table 4. In the adenomyosis and no pathology groups, they have no significant difference in both age and parity nor associated symptoms as pain and bleeding. The incidence of chronic cervicitis showed no significant difference. Weight of the uterus in the adenomyosis group was significantly higher than the no pathology group Table 5. In the adenomyosis and endometriosis group there were no significant difference in any of the comparable parameters between the two groups but the number was tiny (3). In the malignancy group the only positive significant difference was in the age being older than the no pathology group, only two cases Table 5.

Table 1 No pathology vs adenomyosis and fibroid bleeding

Classification	Number	Mean	SD	Median	F	Significance
Adenomyosis & fibroid	29	0.9655	0.1857	1		
Normal	24	0.6667	0.48154	1		
Total	53	0.8302	0.37096	1	9.496	0.003

Table 2 No pathology Vs adenomyosis and fibroid uterus weight

Classification	Mean	N	Std. Deviation	Median
FibAdeno	190.5517	29	63.6837	167
Norm	118.3333	24	35.67811	112
Total	157.8491	53	63.74903	157

P: 0.000

Table 3 No pathology vs leiomyoma group bleeding

Classification	Mean	N	Std. Deviation	Median
Norm	0.6667	24	0.48154	1
Fib	0.9375	16	0.25	1
Total	0.775	40	0.4229	1

P 0.046

No pathology vs Leiomyoma groups

Table 4 Uterus weight

Classification	Mean	N	Std. Deviation	Median
Norm	118.3333	24	35.67811	112
Fib	159	16	65.92117	157
Total	134.6	40	53.18994	127

P: 0.016

Normal vs adenomyosis

Table 5 Uterine weight

Classification	Mean	N	Std. Deviation	Median
Norm	118.3333	24	35.67811	112
Adeno	165.3478	23	69.72779	157
Total	141.3404	47	59.38096	134

P: 0.005

Normal compared to malignancy

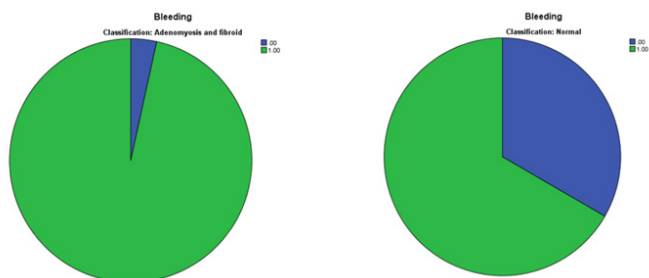


Figure 1 No pathology vs adenomyosis and fibroid bleeding.

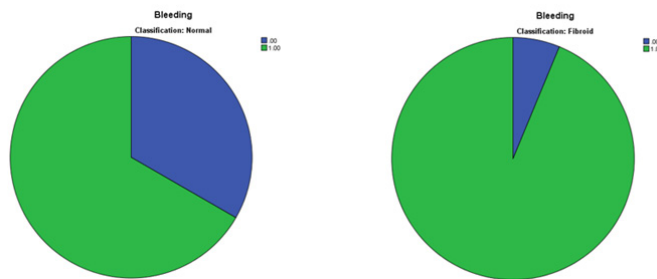


Figure 2 No pathology vs leiomyoma group bleeding.

Discussion

The incidence of adenomyosis as a sole pathology or in combination with other pathology was 54.5% while adenomyosis alone represents 22.8%. Kolar et al.,¹ in their study of 78 specimens, adenomyosis alone represented 20.5 % and in combination with leiomyoma was 38.5%. In Mishra et al.,⁵ adenomyosis was found in 34 cases out of 277 specimens studied (12.3). Patil et al.,⁶ found adenomyosis in 30 cases out of 150 (20%). Khan et al.,⁷ reported adenomyosis alone in 6% and adenomyosis with other pathology in 15%. Salmon et al.,⁸ found adenomyosis in 17.3% and found the prevalence to be 19.3%. Zaid et al.,¹⁰ in a large retrospective study of 2544 hysterectomy specimens, adenomyosis was found in 793 cases (31.2%). The prime aim of this study was to correlate the degree of invasion of adenomyosis in the myometrium to the severity of symptoms. Unfortunately, our hospital histopathological reports ignored this point and only diagnosed adenomyosis. However, it is noticed from this study that prevalence of adenomyosis in these specimens is considerably high. The main presenting symptom was bleeding Table 1 and Figure 1 while pain was not significantly different from the no pathology group. The absence of pain as the main presenting symptom in adenomyosis specimens in addition to the high incidence may indicate that a considerable number of mild adenomyosis were involved in the study.

Fibroids either alone or in combination with other pathology were found in 45 cases (44.6%). Kolar et al.,¹ found that fibroid was the commonest pathology among the 78 cases (42.3%) and Taiwana et al.,⁹ found a prevalence of 43.7% of 374 cases, Tahira et al.,¹¹ found an incidence of 41.7%. All these findings were comparable with this study. The prevalence of Fibroids in Khan et al.,⁷ study was 38% while in Patil et al.,⁶ was 32%. Zaid et al.,¹⁰ reported an incidence

of 27.4%. The main presenting symptom of this group was bleeding Table 3 and Figure 2 and weight of their uteri was significantly heavier than no pathology group Table 4 while age, parity, pain and chronic cervicitis incidence did not show any significant difference. Bleeding is the most common symptom in both adenomyosis and fibroid. In the group of adenomyosis and fibroid 28 presented with bleeding out of 29 cases. In leiomyoma group 15 presented with bleeding out of 16 cases. In no pathology group the bleeding was observed in 16 patients out of 24 Table 6.

Table 6 Age

Classification	Mean	N	Std. Deviation	Median
Norm	45.25	24	11.79628	45.5
Mal	65	2	4.24264	65
Total	46.7692	26	12.55168	46

P: 0.029

Another interesting finding of this retrospective analysis is that pain is not a presenting symptom of adenomyosis. This might be explained by the small number of cases and the possibility of early adenomyotic changes. In conclusion, further prospective studies of larger numbers including a detailed study of the degree of the invasion of adenomyosis in the myometrium are needed.

Acknowledgements

None.

Conflicts of interest

The authors declare that there is no conflict of interest.

References

- Kolur A, Desai S, Reddy S, et al. Clinicopathological analysis of hysterectomy specimens. *Trop Path Micro*. 2019;5(5):275–280.
- Sreedhar VV, Jyothi C, Sailaja V, et al. Histopathological Spectrum of Lesions of Hysterectomy Specimens—A Study of 200 Cases. *Saudi J Pathol & Microbiol*. 2016;1(2):54–59.
- Olsson JH, Ellstrom M, Hahlin M. A randomized prospective trial comparing laparoscopic and abdominal hysterectomy. *British Journal of Obstetrics and Gynaecology*. 1996;103(4):345–350.
- Reich H, De Caprio J, McGlynn F. Laparoscopic hysterectomy. *J Gynecol Surg*. 1989;5: 213–216.
- Mishra A, Mishra P, Brig N, et al. Histopathological spectrum of hysterectomy specimens and its correlation with clinical diagnosis at a tertiary care centre. *Trop J Path Micro*. 2019;5(4): 240–247.
- Patil H, Patil A, Mahajan S. Histopathological Findings in Uterus and Cervix of Hysterectomy Specimens. *MVP Journal of Medical Sciences*. 2015;2(1):26–29.
- Khan R, Sultana H. How does histopathology correlate with clinical and operative findings in abdominal hysterectomy? *JAFMC Bangladesh*. 2010;6(2):17–20.
- Salmon H, Smith J, Balisitis M. Is microscopic assessment of macroscopically normal hysterectomy specimens necessary? *J Clin Pathol*. 2022;55(1):67–68.
- Taiwana K, Nibhoria S, Monga T, et al. Histopathological Audit of 373 Nononcological Hysterectomies in a Teaching Hospital. *Pathology Research International*. 2014.
- Zaid S, Thabet M. Histopathological findings in hysterectomy specimens: A retrospective study. *Middle east journal of internal medicine*. 2017;10(1):17–24.
- Tahira Y, Saima J, Mansab, et al. Audit of Gynaecological Hysterectomies. *PJMHS*. 2011;5(3): 561–564.