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Histomorphological Patterns of Hysterectomy Specimens in A Tertiary Care Hospital: A Two-Year Study

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1. Abstract

Introduction: Hysterectomyisthesecondmostcommongynecological surgery next to caesarean section.The indications for hysterectomy may vary from one region to another and histomor- phological pattern may also vary.

Aim: Theaimofthestudyistoanalyzethevarioushistomorphologicalpatternsofuterineandadnexalpathologyinthehysterectomy specimens.

Material and Methods: This is a retrospective study done overaperiodoftwoyearsatthedepartmentofPathology,Zoram Medical College, Mizoram. Data of all hysterectomy specimens during this period were analyzed.

Results: Outofthe142cases,Leiomyomawasthemostcom- mon uterine pathology seen followed by adenomyosis, 63% and 13% respectively. Chronic cervicitis was the most common cer- vical pathology and, in the ovaries, tumor-like lesions functional cysts were the most common pathology seen. The most common indicationforhysterectomywasfibroidfollowedbydysfunctional uterine bleeding.

Conclusion: Thehistopathologicalfindingscorrelatewiththe pre-operative clinical indications; however, a number of lesions wereincidentalfindings.Therefore,itisimportantthateveryhysterectomyspecimenbesubjectedforhistopathologicalexamina-

tion for better post-operative management.

2. Introduction

Hysterectomy is one of the most common gynecological procedures performed all over the world. The most frequent indications for hysterectomy are fibroids, abnormal uterine bleeding, uterovaginal prolapse and endometriosis [1]. Although histopathology correlates well with clinic-radiological diagnosis, various lesions have been discovered on microscopy only. Adenomyosis remains the most commonly missed preoperative diagnosis and getting diagnosed on histopathological examination [2]. Grossly unremarkable many specimens may reveal pathologies on histological examination. Similarly, many non-neoplastic lesions may show malignant foci on microscopy. [3] Hence, all hysterectomy specimens must undergo proper histopathological examination. In our study, hysterectomy specimens were studied and results compared with their clinical diagnosis. The primary aim of our study was to correlate the histopathological features of the disease with its clinical diagnosis. This is especially useful when the patient is not improving on symptoms-based treatment plan, reflecting the importance of histopathology in clinical practice.

3. Materials and Methods

This is a retrospective study done in the department of Pathology, Zoram Medical College, Mizoram, over a period of two years from

January 2018 to December 2019.All hysterectomy specimens irrespective of the type of surgery and indication for hysterecto-my were included in the study. There are no exclusion criteria. Total 142 hysterectomy specimens were included and evaluated for this study. Clinical details and relevant history of the patients were obtained from the requisition forms received along with the specimens.Detailswereenteredintheproformaforthestudyand analyzed.Allhysterectomyspecimensreceivedwereimmediately checkedandtransferredintoa10%bufferedformalinandkeptfor fixation.After 24 hours fixation, gross examination of the specimen was done and checked for size, wall thickness and any mass present. Necessary sections were taken from uterus that includes endometrium, myometrium and serosa. Depending on the gross examination, an additional minimum of 3 sections were taken fromanygrosslyvisiblelesion.Similarly,sectionsfromendocervixandectocervixfrombothlipsofcervixweretaken.Additional minimumof3sections weretakenfrom anygrosslyvisible lesion if present. After proper labeling and recording of the gross findings, tissue pieces were kept in tissue cassettes and further kept forprocessingbyanautomatedtissueprocessor.Afterprocessing, paraffinblocksweremadeandsectionswerecutatapproximately 3-5 µ in thickness using a microtome and stained with H&E stain followed by light microscopic examination.

4. Results

A total of 142 cases of all hysterectomy specimens submitted to Pathology department of Zoram Medical College irrespective of the type of surgery and indication for hysterectomy over a period oftwoyearswereincludedinthestudy.Outofthe142cases,Leiomyoma was the most common uterine pathology seen followed by adenomyosis, 63% and 13% respectively. Chronic cervicitis was the most common cervical pathology and, in the ovaries, tumor-like lesions functional cysts were the most common pathology seen. The most common indication for hysterectomy was fibroidfollowedbydysfunctionaluterinebleeding(Table1and2).

Sl no.	Agegroup(inyears)	Totalno.ofcases(N)	Percentage(%)
1	20-29	1	0.70%
2	30-39	29	20.4%
3	40-49	88	61.97%
4	50-59	19	13.39%
5	60-69	3	2.11%
6	≥70	2	1.40%
	TOTAL	142	100%

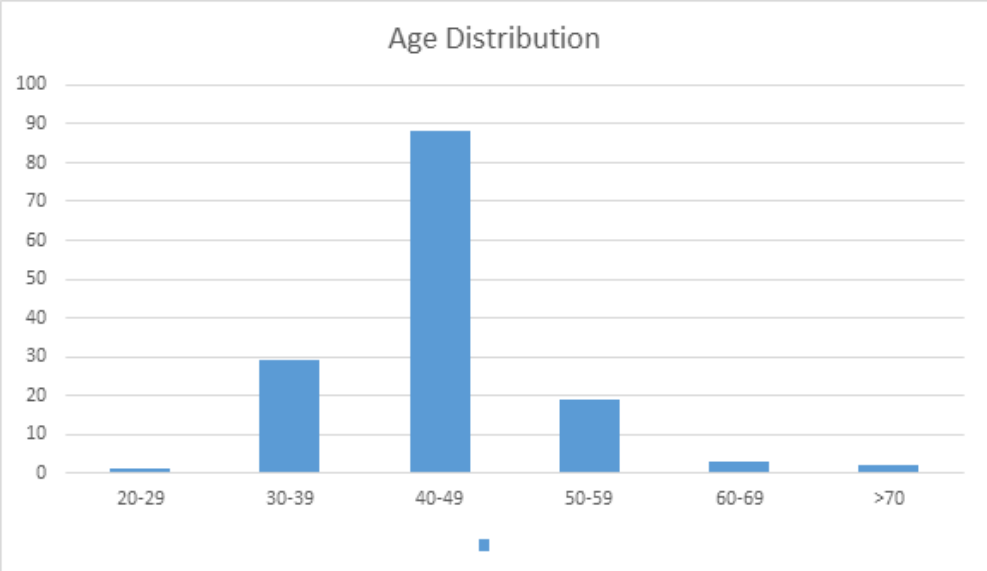

Table1: AgeDistributionofHysterectomy Specimens

Table2: DistributionofVariousTypesofUterineLesions

Sl no.	Uterine lesions	Totalno.ofcases(N)	Percentage(%)
1	Leiomyoma	63	44.37%
2	Adenomyosis	16	11.27%
3	Leiomyoma+Adenomyosis	13	9.15%
4	Disordered proliferative endometrium	4	2.82%
5	Endometrial polyp	3	2.11%
6	Endometrial hyperplasia	1	0.7%
7	Atrophic	14	9.86%
8	Endometrial carcinoma	3	2.11%
9	Prolapse	1	0.7%
Sl no.	**Cervical lesions**	**Totalno.ofcases(N)**	**Percentage(%)**
1	Chronic cervicitis	59	41.54%
2	LSIL	1	0.7%
3	HSIL	1	0.7%
4	Cervical carcinoma	3	2.11%
SLno.	**Adnexal lesions**	**Totalno.ofcases(N)**	**Percentage(%)**
1	Endometriotic cyst	5	3.52%
2	Serouscystadenoma	6	4.23%
3	Serousborderline tumour	1	0.7%
4	Mucinouscystadenoma	1	0.7%
5	Brenner tumour	1	0.7%
6	Sex-cord stromal tumours	1	0.7%
7	Tumourlikelesions	23	16.2%
8	Acute salpingitis	1	0.7%
9	Hydrosalpinx	5	3.52%
10	Hemosalpinx	3	2.11%
11	Paratubal cyst	6	4.23%

5. Discussion

Hysterectomy is a major surgery having physical, emotional, medical,andsexualsignificancetothewomen.[2]Hysterectomy is the surgical procedure for deduction of the uterus with one or bothovariesandfallopiantubes.[6]Thesurgeryisnormallydone wherein no other management is possible or has failed or the female hascompletedherfamily.[7]However,sinceearly20thcentury,itisconsideredasadefinitivetreatmentforpathologiessuch as leiomyoma, adenomyosis, dysfunctional uterine bleeding, prolapse, and malignancies [2,8] despite availability of medical and lesserinvasivesurgeries.[3]Itisasuccessfuloperationintermsof symptomaticreliefandpatientsatisfactionandprovidesdefinitive curetomanydiseasesaffectinguterusaswellasadnexaltissue.

[9] This study was conducted to analyse the pattern of lesions in hysterectomy specimens, to correlate the histopathological findingswiththeclinicalindications,andtocompareourfindingswith those of other studies. One hundred and forty-two hysterectomy specimenswerestudiedinthisstudy.Mostfrequentclinicalpresentation wasAbnormal Uterine Bleeding .We can correlate these findings with the studies by Lodha and Bharti. [7] and Medhi et al. [8] AUB is irregular uterine bleeding occurring without any pelvicpathology,pregnancy,oranymedicalconditions.Thecause is disrupted normal ovulatory pattern due to abnormal hormonal imbalance.[9]ManywomenwithAUBmayundergounwarranted hysterectomywithoutadefinitediagnosis[10].

Vaginal discharge was a common overlapping clinical complaint in the most of patients and it usually gets untreated because patients do not seek clinical advice. As reported by Singh [11] in their study, vaginal discharge was considered as one of the most common health problem of women in their reproductive age group. In our area, females do not seek medical advice for white discharge per vagina until it gets complicated with other lesionsof the uterus and come very late when superadded symptoms develop.Total abdominal hysterectomy (74.8%) was the most commonlyperformedtypeofhysterectomyinourstudywhichwasin accordance with studies by Baral et al.,[1] Lodha and Bharti, [7] Patel et al.,[12] and Vaidya et al.,[13] but was not seenin study byGuptaetalwherevaginalhysterectomywasthemostcommon method [14]Abdominal route is associated with prolonged hospital stay, more cost and more complications as compared to the vaginalroutewhichisencouragedonlyifthediseaseisconfinedto the uterus and uterus weighs <280 g. [7] In our study, majority of patients were undergoneTotal abdominal hysterectomy for better compliance. Ovarian neoplasm is the most fascinating tumour of womenintermsofitshistogenesis,clinicalbehaviour,andmalignantpotential.[15]Inourstudy,themostcommonovarianpathol- ogy was found simple serous cyst in 46 of the cases followed by dermoid cyst in 12 cases.

Mostcommonagegroupfoundtoundergohysterectomyinour studywas40–49years(61.97%),whichwassimilartofindings

byBaraletal.,[1]Nyirahabimanaetal.[3]LodhaandBharti,
[7] Medhi et al.,[8] and Patel et al. [12] Carcinoma uterine cervix is one of the leading causes of cancer death among women worldwide. [16] In our study, out of two cases of CIN, one case was of CIN-I (LSIL) grade and one was CIN-III (HSIL). Out of three cases of squamous cell carcinoma of cervix, two cases were invasive and one case was microinvasive type. Chronic cervicitis wasthemostcommonuterinelesioninourstudy(41.54%).Itwas not an indication for hysterectomy, but was an incidental finding inlargenumberofcases.ChroniccervicitiswasalsoamostcommonhistopathologicalfindinginthestudydonebyRatheretal.
[17] Leiomyoma was the most common myometrial lesion in our study. Most of the studies done on the histopathological study of hysterectomy specimen until date reveals uterine leiomyoma as the most common tumor noted in the uterus. Most of the cases of leiomyomaaffectedthechildbearingagegroup.Leiomyomahasa 70–80%cumulativeincidenceinchildbearingyears.[18]Leiomy- oma usually presents with dysmenorrhea, bleeding per vaginum, andlowerabdominalmass,butadenomyosishasvaguesymptoms andisdiagnosedmajorlyonhistopathology;hence,histopathological diagnosis holds great importance in uterine lesions [19].

6. Conclusion

Thoughthehistopathologicalexaminationcorrelateswellwiththe pre-operativeclinicaldiagnosis,anumberoflesionswerealsoencountered as pure incidental findings. Hence, it is mandatory that every hysterectomy specimen should be subjected to histopathological examination so as to ensure better post-operative management.

7. Compliance of Ethical Standards

ThisstudyhastheapprovalofInstitutionalEthics Committee

8. ConflictofInterest

Theauthorsdeclarenoconflictofinterest.

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