IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 3 Ver. 3 March. (2018), PP 15-20
www.iosrjournals.org

A Study of Spectrum of Histomorphological Changes in Endometrial Tissue – An Experiences In A Tertiary Care Hospital

Dr.T.Bharath[1], [*]Dr.U.Parameswari Babu[2],Dr.Sp Naga Praphulla[3]
[1](Assistant Professor,Department Of Pathology, Nimra Institute Of Medical Sciences,Ibrahimpatnam, Vijayawada,A.P India)
[2](Assistant Professor, Department Of Pathology, Rvs Ims, Chittoor, A.P. India)
[3](Senior Resident ,Department Of Pathology, Smc, Vijayawada,A.P. India)
Corresponding auther: Dr.T.Bharath

Abstract: ***Background:*** *Endometrium That Lines The Uterine Cavity Is One Of The Most Dynamic Tissue In The Human Body,Is Characterised By Cyclic Responses To The Hormones That Leads To Cell Proliferation, Differentiation And Death, Response To The Sex Steroids,Thus An Interesting Tissue For Histopathology Study. The Microscopic Picture On Histopathological Examinationdifferswith Age Of The Patient, Type And Dose Of The Hormonal Therapy. The Aim Of The Study Is To Study The Histopathological Spectrum Of Endometrial Tissue Biopsies In D &C.* ***Materials & Methods****: This Is A Descriptive, Cross Sectional Study Over A Period Of 6 Months From July 2017 To December 2017. Total 100 Tissue Samples Of Dilatation & Curettage,Done For Diagnostic And Therapeutic Purpose, At The Department Of Gynaecology And Obstetrics. These Samples Were Received To Department Of Pathology Dr.Psims & Rf, Chinnaoutpalli, India. After Fixation In 10% Formalin For 12-24 Hours And The Entire Tissue Was Taken For Routine Tissue Processing And H&E Staining, Histopathological Diagnosis Was Made .This Studywas Approved By Institutional Ethical Committee.* ***Results:*** *Total Of 100 Biopsies Were Categorized Into Non-Neoplastic And Neoplastic Lesions. Non-Neoplastic Were 89(89%) Cases And Neoplastic Were 11(11%) Cases. Higherincidence Of Morphological Variations Inendometrial Biopsies Were Noted In The Peri And Post Menopausal Age Of Women's Life. The Glandular And Stromaldyssynchrony Of The Endometrium Was The Commonest Change That Was Encountered In All The Age Groups. Variations In The Endometrial Pathology Microscopically, In All The Samples From Reproductive Age To Post-Menopausal Were Mostly Due To The Excessive External Use Of Steroid Hormones That Were Given By The Gynaecologist Prior To The D & C To Relive The Signs And Symptoms Based On Clinical Diagnosis Without Finding The Underlying Aetiology.* ***Conclusion:*** *External Hormonal Therapy Given By The Treating Gyencologist For Symptomatic Relief Of Clinical Signs And Symptoms, Influence The Endometrial Tissue And Sometimes It May Mask The Underlying Indigenous Pathology Of Endometrium And At Point May Miss The Hyperplastic And Neoplasticlesions In Early Age Which Leads To The Advancement Of Disease. Histopathological Examination Of Endometrial Biopsy Is Amajor Diagnostic Tool In Evaluation Of Changes Of Endometrium And A Specificdiagnosis Could Help The Physician To Plan Therapy Forsuccessful Management Of Before It Progress Into Further Carcinoma*

Keywords: *Endometrium, Proliferative Phase, Secretory Phase, Estrogen, Progesterone.*

Date of Submission: 24-02-2018 Date of acceptance: 12-03-2018

I. Introduction

The Endometrium Was One Of The Organs That Respond To The Circulating Hormones Oestrogen And Progesterone. In Normal Cycles, The Menstrual Shedding Is Followed By Endometrial Proliferation Under Estrogenicstimulation. The Endometrial Thickness Increases As A Result Of Active Growth Of Glands, Stroma And Blood Vessels. During The Proliferative Phase The Endometrial Glands Grown And Become Tortuous Because Of Active Proliferation Of Epithelial Cells [1]. The Presence Of Oestrogen Receptors In The Nuclei Of Endometrial Cells Is Responsible For All The Changes In Proliferative Phase. After Ovulation, The Secretion Of Progesterone Inhibits The Proliferative Activity Of The Endometrium And Induces A Complex Secretory Activity. The Secretory Changes Take Place Only In An Oestrogen-Primed Endometrium[2].

There Was A Wide Range Of Endometrial Lesions Including Non- Neoplastic And Neoplastic That Occur During Any Time Of The Women's Life. There Is An Age Specific Association Of Endometrial Lesions[3].Histopathological Examination Of D&C Which Is A Short And Cost-Effective Outpatient Procedure Will Pin Point The Exact Cause Of Underlying Endometrial Aetiology And Not Only Helps In Planning Proper

Management But Also Avoids Unnecessary Exogenous Hormonal Therapy To The Patient Which Has Adverse Effects On Long Term Use[4].

Hence Histopathological Examination Is Mandatory, In Case Of Every Women (Reproductive, Peri-Menopausal And Post- Menopausal) Who Attends Gynaecologistward For Any Problem, Prior To The Initiation Of The Treatment Which Alters Histo-Morphology On Endometrium Tissue.

II. Materials And Methods

Present Study Was A Descriptive, Cross Section Study Conducted Over A Period Of Six Months Study From July 2017 To December 2017 Included 100 Cases Of Endometrial Samples Obtained From D & C Procedure From Patients Clinically Diagnosed As Having Different Gynaecological Problems Who Attended Opd And Referred To Department Of Pathology At Dr.Psims & Rf, Chinnaoutpalli, Vijayawada, A.P.Demographic Data Regarding Age, Chief Complaints, Clinical Examination, Radiological Investigations Was Retrieved From Histopathology Department And Opd Records. All The Received Biopsies Were Examined, Fixed With 10% Formalin. Processed And H&E Staining For Microscopic Examination Was Done. Final Diagnosis Was Made, Based On Histomorphological Examination Of Lesions Into Non-Neoplastic And Neoplastic. Data Tabulated And Analyzed To Know Relative Frequencies Of Lesion Presentation.

III. Results

In Total Of 100 Cases Diagnosed On D & C Samples. Highest Number Of Cases That Were Encountered Are Non-Neoplastic 89 (89%) Cases And Neoplastic Were 11(11%) Cases. Patients Were Categorised Into Reproductive, Perimenopausal And Postmenopausal Group. Majority Of The Patients Were In Perimenopausal Age Group Constituting 25%, Whereas Patients In Postmenopausal Age Group Constituted 55% And Reproductive Age Group 20%.

Table 1: Age Wise Distribution Of Cases

Age In Years	**No. Of Cases**
25 - 35	20
36- 45	25
46-55	30
>56	25

Table 2 Spectrum Of Endometrial Lesion In Different Age Groups

Spectrum Of Endometrial Tissue	**25-35 Age In Yrs**	**36-45 Age In Yrs**	**46-55 Age In Yrs**	**>55 Age In Yrs**	**Total**
Proliferative Phase	07	00	02	00	09
Secretory Phase	04	02	01	00	07
Disordered Proliferative Endometrium	04	04	02	00	10
Endometritis	01	02	03	04	10
Dyssynchronous Endometrium	02	09	09	06	26
Endometrial Polyps	02	02	03	02	09
Atrophic	00	00	03	05	08
Simple Hyperplasia	00	02	03	00	05
Complex Hyperplasia	00	01	02	02	05
Tumours	00	01	04	06	11
Total	20	25	30	25	100

The Most Common Clinical Presentation In The Reproductive Age Group Wasinfertility, Whereas In Peri And Post-Menopausal Women Was Of Abnormal Bleeding. Few Biopsies Were Taken Before The Start Of Treatment And Few Were Post Therapy Specimens.

Figure 1: Microphotograph Of Proliferative Phase Endometrium (40x H&E)

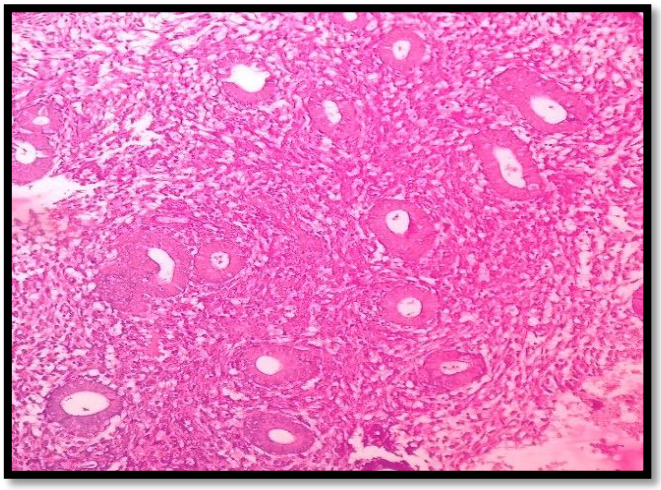


Figure 2: Microphotograph Of Secretory Phase Endometrium (40 X H&E)

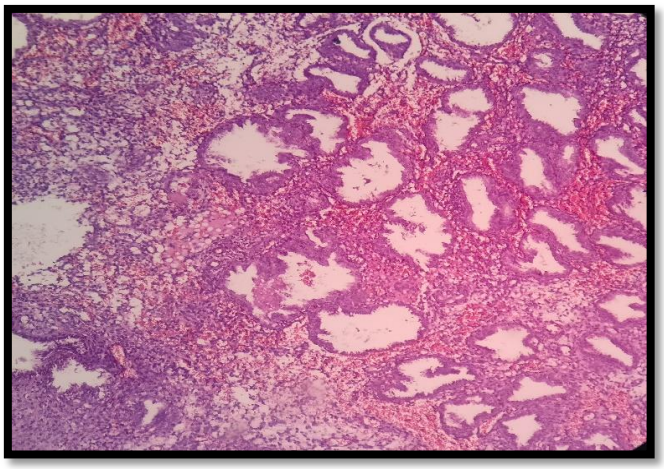


Figure 3: Microphotograph Of Glandular And Stromal Breakdown (40x H&E)

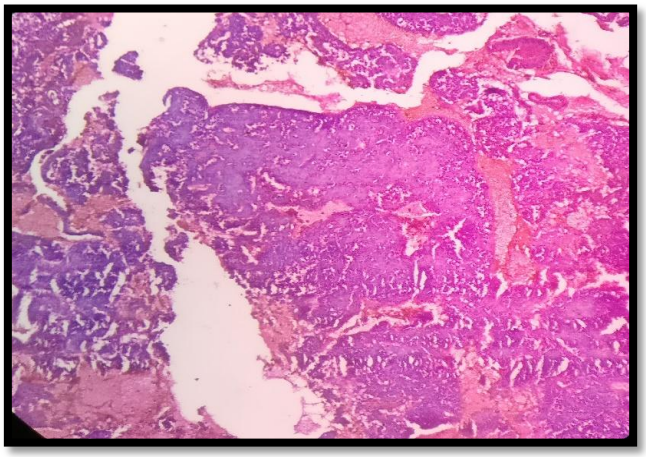


Figure 4: Microphotograph Dyssynchronous Endometrium (40x H&E)

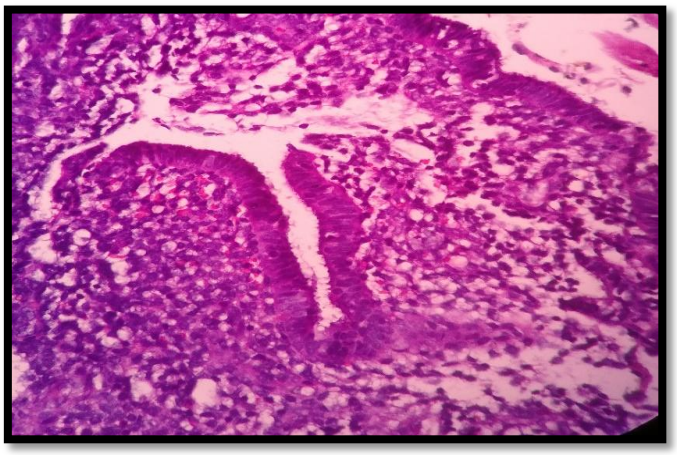


Figure 5: Microphotograph Endometrial Polyp (40x H&E)

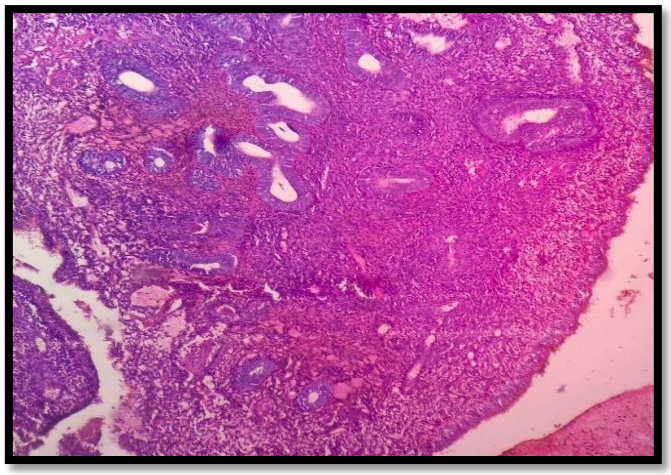


Figure 6: Microphotograph Simple Hyperplasia Without Atypia(40x H&E)

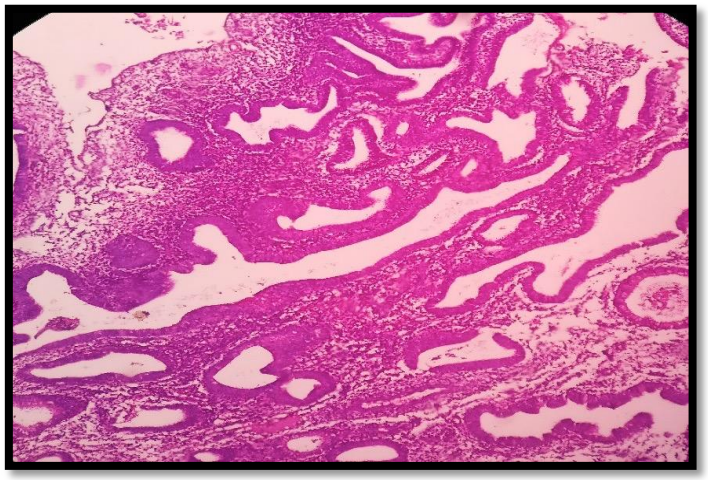


Figure 7: Microphotograph Ofcomplex Hyperplasia With Atypia (40x H&E)

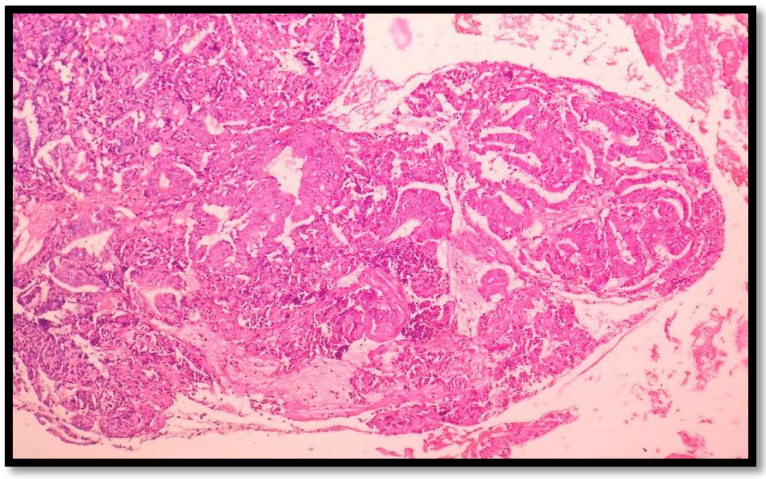
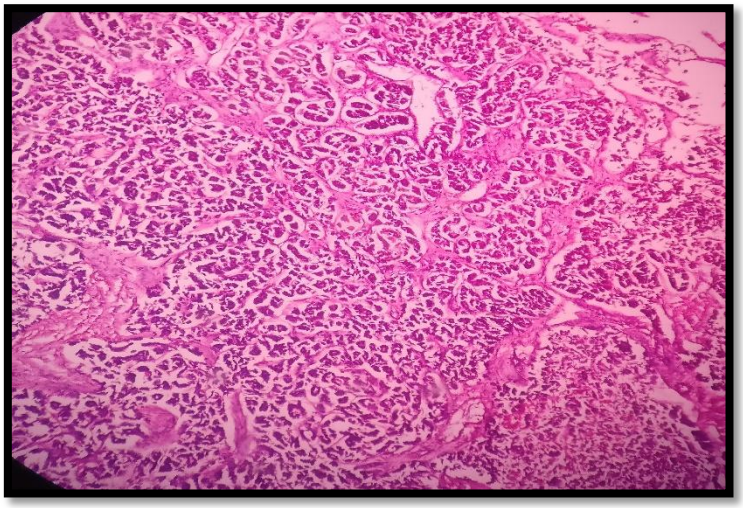


Figure 8: Microphotograph Of Adenocarcinoma Endometrium(40x H&E)



IV. Discussion

The Diseases Of Endometrium Varies From Age To Age And Causes Different Signs And Symptoms In Reproductive, Perimenopausal And Postmenopausal Women And The Spectrum Of Lesions That Were Diagnosed In The Endometrial Tissue Biopsies Includes Normal Proliferative Phase, Secretaory Phase, Disorder Proliferative Endometrium, Endometritis, Dyssynchronus Endometrium, Endomertrial Polyp ,Atrophic Endometrium, Simple And Complex Hyperplasia, Endometrial Carcinoma[5].

Majority Of The Patients Were In Perimenopausal Age Group (30) Followed By The Post-Menopausal (25) Which Was Comparable With The Study Of Rajshri Et Al[5]. The Most Common Clinical Presentation In Reproductive Age Group Was Infertility And Most Frequent Clinical Complaint In Peri And Postmenopausal Women Was Excessive Bleeding.

In Our Present Study The Most Common Finding Encountered Microscopically Was Proliferative Phase Endometrium Followed By The Secretory Phase Endometrium In A Women Of Reproductive Age Group Which Was Not Comparable To The Study Done By Bhatta Et Al Where Higher Incidences Of Proliferative Phase Endometrium In Perimenopausal Age Group . In The Present Study Dyssynchronous Endometrium Was Noted High In The 46-55 Age Group Which Was Not Been Seen By Any Other Studies Of Rajshri Et Al[6], Khare A Et Al[7], Bhatta Et Al[8] These Patients Who Were Microscopically Diagnosed As Dyssynchronous Endometrium Clinically Presented As Excessive Bleeding. Microscopically These Cases Were Seen As Breakdown Of Stroma With Crowding Of Glands. Few Cases Among Them Showed Nuclear Stratification, Glandular Crowding, And Complex Glandular Pattern In An Edematous And Decidualized Stroma. (Fig.4)

Retrospective Evaluation Of These Patients Showed Most Of The Patients Were On Hormonal Treatment Prior To The D & C For Regression Of Clinical Symptoms. Higher Incidences Of Carcinoma Was

Noted In The Postmenopausal Age Group And The Adenocarcinoma Was The Most Common Malignant Tumour Encountered In Our Present Study.

V. Conclusion

With Our Present Study Done We Concluded That In Endometrial D & C Tissue Samples We Sign Out Maximum Cases Of Proliferative And Secretory Phase Endometrium In Reproductive Agegroup In A Routine Practice Taking Consideration Of Clinical Data And Other Endometrial Lesions In Different Age Groups. At Times We Encountered Few Cases Showing A Breakdown Of Endometrium And Dyssynchronous Pattern Of Endometrium That Deviated The Diagnosis From Normal Phases Of Endometrium.

Problem In Reporting The Endometrial Tissue On D & C For Pathologist Arises Only When Samples Were Taken After The Start Of Treatment In Peri And Post-Menopausal Women. External Hormonal Therapy Given By The Treating Gyencologist For Symptomatic Relief Of Clinical Signs And Symptoms, Influence The Endometrial Tissue And Sometimes It May Mask The Underlying Indigenous Pathology Of Endometrium And At Point May Miss The Hyperplastic And Neoplasticlesions In Early Age Which Leads To The Advancement Of Disease.

References

[1]. Mutter G.L, Ferenczy A, Blaustein's Pathology Of Female Genital Tract: Anatomyand Histology Of The Uterine Corpus, Fifth Edition; Springer-Verlag; 2002: 383-419.
[2]. Speroff L, Fritz Ma. Menopause And The Peri-Menopausal Transition. In :Clinicalgynaecologic Endocrinology And Infertility. 7th Edition. Jaypee Brothersmedpublishers (P) Ltd. 2005: 621-88.
[3]. Sherman Me, Mazur Mt, Kurman Rj. Benign Diseases Of The Endometrium. In:Kurmanrj, Editors. Blaustein's Pathology Of Female Genital Tract. 5th Ed. Newyork : Springerverlag; 2002 :437-453.
[4]. Sarswati D, Thanlca J, Shalinee R, Arthi R, Jaya V. Study Of Endometrial Pathology Inabnormal Uterine Bleeding. Obstet&Gynecol India. 2011; 61: 424-3.
[5]. Babbar K, Jogi S, Arya Rc. Clinical Pattern And Spectrum Of Endometrial Pathologies Inperimenopausal And Post-Menopausal Women: Experience In A Tertiary Care Institute.Jsafoms. 2015;3(1):9-1.
[6]. Rajshri P. D, N.V. Dravid, Suryawanshi Kh, Gadre As, Bagale Ps, And Ahire N.Jclindiagn Res. 2013 December; 7(12): 2774–2776.
[7]. Khare A, Et Al. Morphological Spectrum Of Endometrium In Patients Presenting Withdysfunctional Uterine Bleeding. Peoples's Journal Of Scienti□C Research.2012;5(2):13–16.
[8]. Bhatta S, Sinha Ak. Histopthological Study Of Endometrium In Abnormal Uterinebleeding. Journal Of Pathology Of Nepal. 2012;2:297–300.

Dr.T.Bharath "A Study Of Spectrum Of Histomorphological Changes In Endometrial Tissue – An Experiences In A Tertiary Care Hospital "IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 3, 2018, pp 15-20