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

Dr.T.Bharath1,* Dr.U.Parameswari Babu2, Dr.Sp Naga Praphulla3
1(Assistant Professor, Department Of Pathology, Nimra Institute Of Medical Sciences, Ibrahimpatnam, Vijayawada, A.P India)
2(Assistant Professor, Department Of Pathology, Rvs Ins, Chittoor, A.P. India)
3(Senior Resident, Department Of Pathology, SMC, Vijayawada, A.P. India)
Corresponding author: 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 Examination differs with 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, Chinnanappalli, 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 Study was 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. Higherricidence Of Morphological Variations Inendometrial Biopsies Were Noted In The Peri And Post Menopausal Age Of Women’s Life. The Glandular And Stromal dysynchrony 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 Excesses 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 Gynecologist 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 Neoplastic lesions In Early Age Which Leads To The Advancement Of Disease. Histopathological Examination Of Endometrial Biopsy Is A major Diagnostic Tool In Evaluation Of Changes Of Endometrium And A Specific Diagnosis Could Help The Physician To Plan Therapy For Successful Management Of Before It Progress Into Further Carcinoma

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

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I. Introduction


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

<table>
<thead>
<tr>
<th>Age In Years</th>
<th>No. Of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 - 35</td>
<td>20</td>
</tr>
<tr>
<td>36- 45</td>
<td>25</td>
</tr>
<tr>
<td>46-55</td>
<td>30</td>
</tr>
<tr>
<td>&gt;56</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 2 Spectrum Of Endometrial Lesion In Different Age Groups

<table>
<thead>
<tr>
<th>Spectrum Of Endometrial Tissue</th>
<th>25-35 Age In Yrs</th>
<th>36-45 Age In Yrs</th>
<th>46-55 Age In Yrs</th>
<th>&gt;55 Age In Yrs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proliferative Phase</td>
<td>07</td>
<td>00</td>
<td>02</td>
<td>00</td>
<td>09</td>
</tr>
<tr>
<td>Secretory Phase</td>
<td>04</td>
<td>02</td>
<td>01</td>
<td>00</td>
<td>07</td>
</tr>
<tr>
<td>Disordered Proliferative Endometrium</td>
<td>04</td>
<td>04</td>
<td>02</td>
<td>00</td>
<td>10</td>
</tr>
<tr>
<td>Endometritis</td>
<td>01</td>
<td>02</td>
<td>03</td>
<td>04</td>
<td>10</td>
</tr>
<tr>
<td>Dyssynchronous Endometrium</td>
<td>02</td>
<td>09</td>
<td>09</td>
<td>06</td>
<td>26</td>
</tr>
<tr>
<td>Endometrial Polyps</td>
<td>02</td>
<td>02</td>
<td>03</td>
<td>02</td>
<td>09</td>
</tr>
<tr>
<td>Atrophic</td>
<td>00</td>
<td>00</td>
<td>03</td>
<td>05</td>
<td>08</td>
</tr>
<tr>
<td>Simple Hyperplasia</td>
<td>00</td>
<td>02</td>
<td>03</td>
<td>00</td>
<td>05</td>
</tr>
<tr>
<td>Complex Hyperplasia</td>
<td>00</td>
<td>01</td>
<td>02</td>
<td>02</td>
<td>05</td>
</tr>
<tr>
<td>Tumours</td>
<td>00</td>
<td>01</td>
<td>04</td>
<td>06</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>25</td>
<td>100</td>
</tr>
</tbody>
</table>
The Most Common Clinical Presentation In The Reproductive Age Group Was infertility, 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)
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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)
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, Secretory Phase, Disorder Proliferative Endometrium, Endometritis, Dyssynchronous Endometrium, Endometrial 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 Al5. 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 Al6, Khare A Et Al7, Bhatta Et Al8. 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

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

Figure 8: Microphotograph Of Adenocarcinoma Endometrium(40x H&E)
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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 Dysynchronous 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 Gynecologist 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
[6]. Rajshri P. D, N.V. Dravid, Suryawanshi Kh, Gadre As, Bagale Ps, And Ahire N.Jclindiagn Res. 2013 December; 7(12): 2774–2776.