SUMMARY AND CONCLUSIONS

The present study was conducted in Department of Obstetrics and Gynaecology, M.L.B. Medical College, Jhansi.

Total 55 cases were included in the study out of these 21 were normal control women in three different phases of menstrual cycle i.e. 7 each from post menstrual and mid cycle phase. Women in the different trimester of pregnancy 7 each from 1st and 2nd trimester and 6 from the 3rd trimester. The third group comprised up of women having cervical pathology like cervical erosion, endocervicitis and dysplasias (in their different grades).

Cervical mucus was collected by cervix directly with the help of tubulcin syringe without needle and diluted with known volume of saline and stored at -20°C. Estimation of immunoglobulin levels (IgG/IgA) was done by radial immunodiffusion.

The results obtained were:

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean level</th>
<th>IgG</th>
<th>IgA</th>
</tr>
</thead>
<tbody>
<tr>
<td>I - Menstrual cycle (Normal control)</td>
<td></td>
<td>107.2±59.4</td>
<td>49.0±35.3</td>
</tr>
<tr>
<td>II - Pregnant women</td>
<td></td>
<td>107.20±48.15</td>
<td>42.0±23.53</td>
</tr>
<tr>
<td>III - Cervical pathology</td>
<td></td>
<td>299.21±124.52</td>
<td>167.32±93.90</td>
</tr>
<tr>
<td>a) Endocervicitis</td>
<td></td>
<td>226.27±98.66</td>
<td>107.5±34.29</td>
</tr>
<tr>
<td>B) Dysplasia</td>
<td></td>
<td>430.5±77.81</td>
<td>275.0±61.41</td>
</tr>
</tbody>
</table>
Following conclusions were drawn from this study:

1. That age does not exert any effect on the level of IgA or IgG in cervical mucus contrary to that observed by Waldman et al (1971).

2. Human female genital tract is a local antibody secretor. This is reflected by IgG/IgA ratio 2.2 in normal controls, 2.6 in pregnant women and 1.8 in women with cervical pathology. In serum this ratio ranges from 5 to 8. It suggests that IgG found in mucus are not derived from blood. Moreover, with the progress of pregnancy a relative increase in immunoglobulin levels was noticed which is in contrast to serum levels in pregnancy (Ammeni et al 1978 and many other workers). Where a decrease occur with progress of pregnancy.

3. Immunoglobulin levels are minimum at mid cycle and maximum during premenstrual phase. The decrease in Ig levels at mid cycle is quite significant which can not be explained on the basis of dilution of mucus alone (which is normal at mid cycle). Some other cause should be sought by further studies.

4. More studies are required to prove the present observations. There is lot of controversy regarding change in Ig levels with menstrual cycle. Methodology of cervical mucus collection and storage should be standardized.
5. The premenstrual increase in Ig may be reflecting a protective mechanism of human uterus/cervix to protect early conceptus from infection (a review just suggested by Coughlan and Skinner 1977).

6. There is no statistically significant difference between pregnancy and normal controls as far as mean levels of IgA and IgG are concerned. But in pregnancy a rising trend in IgG particularly IgA was observed with the pregnancy.

7. Very high levels of IgA and IgG were observed in patients with cervical pathology particularly those with cervical dysplasia. It is suggested that estimation of IgG and IgA should be done in patients with suspected cervical malignancies as diagnostic aid.
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