LGSIL Cytology, Histology, and Colposcopy

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## Cervical Cytology

<table>
<thead>
<tr>
<th>Pap</th>
<th>WHO</th>
<th>CIN</th>
<th>Bethesda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class I</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td>Class II</td>
<td>Atypic inf.</td>
<td>ASC</td>
<td>Benign or ASC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ASC-US</td>
<td>ASC-US and ASC-H</td>
</tr>
<tr>
<td></td>
<td>Dysplasia</td>
<td>SIL</td>
<td>SIL</td>
</tr>
<tr>
<td>Class III</td>
<td>Mild</td>
<td>CIN 1</td>
<td>LGSIL</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>CIN 2</td>
<td></td>
</tr>
<tr>
<td>Class IV</td>
<td>Severe</td>
<td>CIN 3</td>
<td>HGSIL</td>
</tr>
<tr>
<td>Class V</td>
<td>CIS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Cervical Cancer Lifetime Risk

- Women Unchecked: 1/100
- Women LGSIL Followed Up: 1/500
- All CINs (After Treatment): 1/250
- HPV Infection Without Treatment: 5-10/100
## Natural History of CINs

<table>
<thead>
<tr>
<th></th>
<th>Regression</th>
<th>Persistence</th>
<th>Progression to CIN 3</th>
<th>Invasive Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIN 1</td>
<td>%60</td>
<td>%40</td>
<td>%10</td>
<td>%1</td>
</tr>
<tr>
<td>CIN 2</td>
<td>%40</td>
<td>%40</td>
<td>%20</td>
<td>%5</td>
</tr>
<tr>
<td>CIN 3</td>
<td>%33</td>
<td></td>
<td></td>
<td>&gt;%12</td>
</tr>
</tbody>
</table>

Östör AG, Int J Gynecol Pathol, 1993
Cytologic and Histologic Characteristics of LGSIL

- Enlargement of the cell nucleus to at least three times the size of a normal intermediate cell nucleus
- Hyperchromatic chromatin
- Frequent binucleation
- The koilocyte with its characteristic perinuclear halo or cytoplasmic clearing
  - The cytoplasm is frequently pushed to the periphery of the cell
Cytologic Characteristics
Cervical Intraepithelial Neoplasia (CIN)

Normal epithelium  |  Lower third  |  Two third  |  More than two third

Microinvasive carcinoma
Histologic Characteristics
Unsatisfactory Colposcopy in LGSIL
Satisfactory Colposcopy in LGSIL
Localization

- Usually SCJ
- Any part of ectocervix or endocervix
Localization

- Better diagnosis at mature transformation zone
- Hard to diagnose at immature metaplasia
Immature Metaplasia
Immature Metaplasia & CIN1
Contour

- Usually macular contour
Contour

- Micropapillary, papillary, papular and bulging contours
- Occasionally brain-like appearance
Diffuse and asymmetrically shaped
Margin

- Characteristical irregular, geographic and hairy design
Geographic Design
Geographic Design
Geographic Design
Geographic Design
Geographic Design
Geographic Design
• Colour is subjective thus may not be classified
• Faint white after acetic acid
• Effect of acetic acid disappears by 65% in 4 minutes
Faint Acetowhite Epithelium
Faint Acetowhite Epithelium
Vessels

- Absence of atypical vessels
- Thin, narrow calibrated uniform vessels
- Increased intercapillary distance but vascular spaces unaffected
- Fine mosaic appearance or punctuation
Fine Punctuation
Vessels

- Fine mosaic pattern
Fine Mosaic Pattern
Fine Mosaic Pattern
Condylomas
Schiller’s (Iodine) Test

- CIN 1 lesions are iodine-negative and only in mustard-yellow color
Schiller’s (Iodine) Test
In Pregnancy

LGSIL may be underdiagnosed colposcopically because of the normal physiologic changes of cervix

- Acetowhite reaction problematic
- Estrogen-mediated eversion of the endocervix
- The new proliferation of the endocervical papillae
Other Findings

Lesions usually small

Unifocally or multifocally
Summary of Colposcopy in LGSIL