Clinical Significance and Optimal Management of Atypical Squamous Cells of Undetermined Significance in Cervical Pap Smears
Clinical Significance and Optimal Management of Atypical Squamous Cells of Undetermined Significance in Cervical Pap Smears
(Atypical Squamous Cells of Undetermined Significance, ASCUS) (benign reactive change) from 1995 to 2000. A total of 25,380 cases were analyzed. Among them, 384 cases were diagnosed as ASCUS with a prevalence rate of 1.5%. The distribution was 384/31, which is 1.2%. The distribution of favoring benign reactive process (favoring squamous intraepithelial lesion) was 62 (62.6%), 14 (14.1%), 21 (21.2%), and 2 (2.0%) respectively.

The distribution of favoring benign reactive process (favoring squamous intraepithelial lesion) was 70.0%, 9 (30.0%), 7 (63.6%), and 4 (36.4%), respectively.

The percentages are calculated based on the total number of cases analyzed.
Papanicolaou cervical cytology screening has contributed to reducing cervical cancer incidence dramatically since its implementation in the 1950s. A primary goal of Pap smear screening and follow-up procedure is to prevent cervical cancer by identifying and treating high grade precursor lesions. Pathologists cannot always classify Pap smears as benign or squamous intraepithelial lesions (SIL), and therefore an intermediate category, such as atypical squamous cells of undetermined significance (ASCUS) is needed.

Given the relatively large proportion of high grade squamous intraepithelial lesions (HSIL) cases that are associated with ASCUS cytology, effective triage of ASCUS reports is essential. Although routine colposcopic evaluation of all ASCUS cases would provide the greatest patient protection, the frequency of ASCUS makes this impractical. Recent guidelines propose immediate colposcopy, regular repeat Pap testing, loop electrosurgical excision procedure (LEEP) or adjunctive testing such as Human Papilloma Virus (HPV) DNA typing for triage of ASCUS cytology.

This study included 25,380 cases of cervical Pap smears received from January 1995 to June 2000 by the Department of Obstetrics and Gynecology, Inha Hospital, Medical college, Inha University. ASCUS and SIL were diagnosed in 384 cases (1.5%), and 311 cases (1.1%), respectively. The ratio of ASCUS to SIL was 1.2. Colposcopic directed biopsies revealed 14 cases (14.1%) of low grade SIL (LSIL), and 21 cases (21.2%) of HSIL. Among 35 women with ASCUS favoring benign reactive process, 10 (28.6%) had follow-up results above SIL, and 30 of 35 women had subsequent biopsy in that revealed 9 cases (30.0%) for histologic diagnosis above SIL. Among 12 women with ASCUS favoring squamous intraepithelial lesion, 4 (33.3%) had follow-up results above SIL, and 11 of 12 women had subsequent biopsy in that revealed 4 cases (36.4%) for histologic diagnosis above SIL.
The immediate colposcopy with biopsy in women with ASCUS may decrease follow-up visits for Pap testing, reduce patient anxiety, and minimize the loss of high risk cases during follow-up and lower medicolegal litigation. The early colposcopy should be the method of choice for follow-up in women with ASCUS and maybe the most cost-effective follow-up strategy in Korea.

Future studies may provide a morphologic or perhaps molecular basis for distinguishing true precursors of cervical cancer from minor lesions of no significant clinical importance and this would allow a mere coherent and rational approach to diagnosis and management of women with equivocal cytologic finding, such as ASCUS.
I. 

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1995년 1월 1일부터 2000년 6월 30일까지의 기간 동안
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모든 연구결과는 온라인으로 공개됩니다.

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II. BRAZILIAN CYTOSMOUTHERs

1995, 1998, and 2000. A 30% increase in the number of cases of cervical and cytobrush injuries were reported. Cervical brush and cytobrush injuries were defined as a puncture injury of the cervix caused by a cytobrush. Papanicolaou (PAP) smears were performed on 200 patients. The number of cases in which a cytobrush injury was diagnosed was 23% higher than the number of cases in which a cervical injury was diagnosed. In this study, the Bethesda system was used to classify the smears. The cytobrush injury was classified as 2-3 times more likely to occur than a cervical injury. The PAP smear results were analyzed for nuclear atypia (nuclear atypia) and other abnormalities. The results of these analyses are presented in Table 1.

In the analysis of the 1998 cases, 3% of the cases were classified as having a high-grade neoplastic lesion. The number of cases with high-grade neoplasia was 3% higher than the number of cases with low-grade neoplasia. The number of cases with high-grade neoplasia was 3 times higher than the number of cases with low-grade neoplasia. The number of cases with high-grade neoplasia was 3 times higher than the number of cases with low-grade neoplasia.
III. Discussion

1995 1998 2000 6 6 6 6 384 1.5% 1.2% (Table 1).

25,380 176 35 81 77 18 208 (54.2%), 176 12 (25.5%) (Table 2).

(54.2%) 129 (73.3%), 129 17 (9.6%), 17 24 (13.6%), 24 2 (1.1%) (Table 3).

35 (74.5%), 35 12 (25.5%) (Table 1).

99 62 (62.6%), 99 21 (21.2%), 21 2 (2.0%) (Table 4).

- 13 -
12(66.7%) 8(44.4%) 11(61.1%) 10(28.6%) 9(30%)

(Table 5)
Table 1. Results of cervical cytologic examination

<table>
<thead>
<tr>
<th>Result</th>
<th>No. of patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal or reactive</td>
<td>24,583 (96.8)</td>
</tr>
<tr>
<td>ASCUS</td>
<td>384 (1.5)</td>
</tr>
<tr>
<td>Not qualified</td>
<td>337</td>
</tr>
<tr>
<td>Qualified</td>
<td>47</td>
</tr>
<tr>
<td>favoring reactive process</td>
<td>35 (74.5)</td>
</tr>
<tr>
<td>favoring squamous intraepithelial lesion</td>
<td>12 (25.5)</td>
</tr>
<tr>
<td>LSIL</td>
<td>140 (0.5)</td>
</tr>
<tr>
<td>HSIL</td>
<td>171 (0.6)</td>
</tr>
<tr>
<td>Invasive cancer</td>
<td>73 (0.3)</td>
</tr>
<tr>
<td>AGUS</td>
<td>25 (0.1)</td>
</tr>
<tr>
<td>Adenocarcinoma</td>
<td>4 (0.01)</td>
</tr>
</tbody>
</table>

Total number of Pap smear 25,380

ASCUS: atypical squamous cells of undetermined significance
LSIL: low grade squamous intraepithelial lesion
HSIL: high grade squamous intraepithelial lesion
AGUS: atypical glandular cells of undetermined significance
Table 2. Follow-up status of ASCUS

<table>
<thead>
<tr>
<th>Follow-up status</th>
<th>No. of Patient(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow-up loss</td>
<td>208 (54.2)</td>
</tr>
<tr>
<td>Follow-up</td>
<td>176 (45.8)</td>
</tr>
<tr>
<td>repeat Pap alone</td>
<td>77 (20)</td>
</tr>
<tr>
<td>colposcopic exam with biopsy</td>
<td>81 (21.1)</td>
</tr>
<tr>
<td>unsatisfactory colposcopic exam with LEEP*</td>
<td>18 (4.7)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>384</strong></td>
</tr>
</tbody>
</table>

* LEEP: Loop Electrosurgical Excision Procedure
<table>
<thead>
<tr>
<th>Follow-up result</th>
<th>Total follow-up*</th>
<th>Histologic-confirmed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal or reactive process</td>
<td>129 (73.3)</td>
<td>62 (62.6)</td>
</tr>
<tr>
<td>LGSIL**</td>
<td>17 (9.6)</td>
<td>4 (14.1)</td>
</tr>
<tr>
<td>HGSIL***</td>
<td>24 (13.6)</td>
<td>21 (21.2)</td>
</tr>
<tr>
<td>Invasive cancer</td>
<td>2 (1.1)</td>
<td>2 (2.0)</td>
</tr>
<tr>
<td>ASCUS</td>
<td>4 (2.2)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>176</td>
<td>99</td>
</tr>
</tbody>
</table>

* including cases of repeating Pap smears only
** including CIN I and cells with evidence of HPV infection
*** including CIN II and CIN III
**Table 4. Follow-up results of qualified ASCUS**

<table>
<thead>
<tr>
<th>Follow-up result</th>
<th>No. of Patient(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Favor reactive</td>
</tr>
<tr>
<td></td>
<td>Total follow-up</td>
</tr>
<tr>
<td>Normal or reactive process</td>
<td>25(71.4)</td>
</tr>
<tr>
<td>LGSIL</td>
<td>5(14.3)</td>
</tr>
<tr>
<td>HGSIL</td>
<td>5(14.3)</td>
</tr>
<tr>
<td>Invasive cancer</td>
<td>0(0)</td>
</tr>
<tr>
<td>ASCUS</td>
<td>0(0)</td>
</tr>
<tr>
<td>Total</td>
<td>35</td>
</tr>
</tbody>
</table>
Table 5. Follow-up results of qualified ASCUS

<table>
<thead>
<tr>
<th>Follow-up results</th>
<th>No. of patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total follow-up (n=47)</td>
</tr>
<tr>
<td></td>
<td>normal or reactive</td>
</tr>
<tr>
<td>Favor reactive</td>
<td>25 (71.4)</td>
</tr>
<tr>
<td>Favor SIL</td>
<td>8 (66.7)</td>
</tr>
</tbody>
</table>
IV. 1941

George Papanicolaou 1941, la técnica de la papanicolaou se hizo conocida por todos los médicos. La técnica consiste en frotar el cuello uterino con un trozo de papel de seda y luego teñirla con una solución de acridina. Las células normales se teñirán de un color rojo brillante, mientras que las células anormales se teñirán de un color naranja. La técnica se realizó en una muestra de sangre del cuello uterino y se observó un 46-73% de detección de lesiones premalignas.11 En el caso de mujeres que habían sido sometidas a la técnica, se obtuvo un 50% de detección de lesiones malignas.12

La técnica de Papanicolaou fue perfeccionada con el uso de la técnica de ThinPrep, una técnica de cepillado que permite la obtención de una muestra más uniforme y reducir el tiempo de preparación.13 La acridina verde, PaPNET y AutoPap 300 QC fueron utilizados para la identificación de lesiones en el cuello uterino.14

The Bethesda system has an accuracy rate of 90% [15,16] and is used worldwide for cervical cancer screening. It is estimated that 2-5% of cases are missed by the system [17,18].

The Bethesda system has been revised to improve its accuracy and consistency. The 1991 [13] and 1995 [14] revisions added more specific categories to the system.

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...
HPV
can
cause
cancer. HPV
is
detected
by
PCR,
Hybrid
capture II
and
HPV
DNA
testing.

Hybrid
capture II
determines
HPV
DNA
in
samples.

HPV
PCR
has
shown
a
sensitivity
of
200
and
a
specificity
of
92.33%
for
HPV
testing.

Hybrid
capture II
has
a
sensitivity
of
1/10
and
a
specificity
of
30%
for
HPV
testing.

The
sample
size
was
54.2%.

The
results
were
compared
with
the
results
of
HPV
testing.

- 25 -
ÀÇÃßÀû°üÂû¿¡¼­¹ÝÀÀ°æ°ú¼ºÀǰæ¿ì 10¿¹ (28.6%) ¿¡¼­Àúµî±ÞÆíÆò»óÇdz»º´º¯¼ºÀ̾ú´Ù

ÀÇÃßÀû°üÂû¿¡¼­¹ÝÀÀ°æ°ú¼ºÀǰæ¿ì 12¿¹ (25.5%) ¿¡¼­Àúµî±ÞÆíÆò»óÇdz»º´º¯¼ºÀ̾ú´Ù

ÀÇÀúÀûºÐ·ù°¡µÈÃÑ 47¿¹ Áß 41¿¹ Àǰæ¿ì ¿¡¼­¹ÝÀÀ°æ°ú¼ºÀǰæ¿ì 9¿¹ (30%) ¿¡¼­Àúµî±ÞÆíÆò»óÇdz»º´º¯ÀÌ»óÀǺ´º¯À¹¿°×ÀÇÀÇ´ÂãÀ»¼ö¾ø¾ú´Ù
V. 

1. 1995년 1월 1일부터 2000년 6월 30일 사이에 발생한 합의에 따르면, 
   25,380개의 합의가 이루어졌으며, 이 중 1.5%가 384개의 높은 합의를 
   기록하였다.

2. 129개 (73.3%), 24개 (13.6%), 2개 (1.1%), 62개 (62.6%) 등 
   14개 (14.1%), 21개 (21.2%), 2개 (2.0%) 등으로 분포하였다.

3. 47개 (25.5%), 35개 (74.5%), 12개 (28.6%) 등으로 분포하였다.


36. ASCUS, AGUS, LSIL, HSIL, SCC. ASCUS, AGUS LSIL, HSIL, SCC. 1997; Vol 40: No. 7: 1436-49
37. ASCUS-LSIL (ASCUS-LSIL)
