



The Usefulness of Papanicolaou Test in the Cytomorphological Evaluation of Squamous Cell Abnormalities of the Cervix

BRIEF
REPORT

Lepa Bogdanovska , Nevenka Velickova 

ABSTRACT

Papanicolaou or Pap test as a screening method is a suitable method in the prevention of cervical cancer. The aim of the present study was to detect the prevalence of various cervical cytology results in the squamous epithelial tissue of the endocervix and endometrium in women, aged 18-70 years, according to the 2014 Bethesda system. This was a hospital-based cross-sectional study conducted on 16,790 Pap smears prepared from women aged 18-70 years between January 2017 and December 2017. The evaluation of the results is hospital based and not the whole country. Diagnosis of atypical squamous cells of undetermined significance was made in 72 (12%) cases. Atypical squamous cells as a HSIL was seen in 36 (6%) cases, human papillomavirus infection in 26 (4%) cases, low grade squamous intraepithelial lesion as a CIN 1 in 27 (5%) cases and as a CIN 2 in 13 (2%) cases, and high grade squamous intraepithelial lesion (HGSIL or HSIL) or CIN 3 in 5 (1%) cases. The prevalence of various epithelial abnormalities as glandular epithelial cell abnormalities was determined in 20% of women (119 cases), and it was 50% (298 cases) in other abnormalities. According to these results (high prevalence of epithelial cell abnormalities in cervical smears due to I-XII), Pap test as a screening method should begin at the age of 18 years. This screening test can detect abnormal cervical cells before they turn into malignant neoplasm or can be used as a good screening method to detect the earliest signs of carcinogenesis.

Keywords: Cervix, Papanicolaou test, LSIL, HSIL, epithelial abnormalities

INTRODUCTION

According to the increase of incidence of malignant diseases, early diagnosis, therapy, and treatment are the most important. Analyzing the cells and their ratio is particularly important for determining and approving the physiological or pathophysiological mechanisms. Cytodiagnostics as a method is based on the analysis of the cell size, diameter, cytoplasm content, nuclear size, cell membrane construction, fixation of the material staining, and their ratio (1).

The aim of cytology and their used principles and methods is to observe the normal or modified processes that occur at cell level (1). The use of these principles and methods makes it possible to accurately determine all the changes of the cells. By using suitable high-quality appliances and reagents, proper staining, and advanced microscopy, cell analysis can be performed. For this purpose, it is necessary to prepare the slides to be monitored correctly and efficiently. The microscopic preparation itself is prepared in an appropriate manner according to certain confirmed protocols. The cytology can be exfoliative and aspirational (2, 3). Aspirational cytology uses aspirate, the cells for analysis are obtained with puncture using a fine needle, and based on the negative pressure generated during the procedure, the cells are injected from the tissue in which they are located (2). Exfoliative cytology as a part of clinical cytology uses the cells that are desquamated from body surfaces especially the cells from different layers of epithelial tissues. For that purpose, the cells are microscopically examined (their morphology, structure, dimensions, and staining), and different changes or malignancy in the cells is detected or confirmed by the presence of abnormal or atypical cells as a result of some infection, inflammation, or parasitic infestations. Exfoliative cytology uses simple, quick and non-invasive techniques and collects the material from the mouth, urine, sputum, abdominal, pleural, or peritoneal fluid, and vaginal secretion (3). In contrast to the cells in exfoliative cytology, the cells in aspirational cytology have preserved morphology and structure, and in this context, changes are more easily visualized and confirmed (2).

Cytological techniques are fast, simple, and cheap, and they are acceptable from the patients. Papanicolaou or Pap smears as a material are prepared in the procedure as a mechanical exfoliation, when the cells are scraped from the cervix with a spatula (4). Papanicolaou test (abbreviated as Pap test) as a method is very useful for the early detection of cervical cancer. This test was named after George Papanicolaou (1883-1962), an American scientist and academic teacher with Greek origin. Pap test examines the possible changes in cervical

Cite this article as:

Bogdanovska L, Velickova N.
The Usefulness of
Papanicolaou Test in
the Cytomorphological
Evaluation of Squamous
Cell Abnormalities of the
Cervix. Erciyes Med J 2019;
41(1): 96-8.

Faculty of Medical Sciences,
University "Goce Delchev",
Strp. R. Macedonia

Submitted
08.11.2018

Accepted
17.12.2018

Available Online Date
08.01.2019

Correspondence
Nevenka Velickova,
Faculty of Medical Sciences,
University "Goce Delchev"
Strp. R. Macedonia
Phone: +38912 550 436
e-mail:
nevenka.velickova@ugd.edu.mk

©Copyright 2019 by Erciyes
University Faculty of Medicine -
Available online at
www.erciyesmedj.com