

Comparison of Diagnostic Methods in Detection of Squamous Cell Abnormalities in Iranian Women with Abnormal Pap's Smear Test and Associated Demographic and Issues

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ABSTRACT

Background & Objective: Premalignant lesions of cervix have increased dramatically in recent years. Early diagnosis and management of abnormalities have an effective role in preventing the invasion of the disease and also in timely treatment. This study aimed to compare diagnostic methods in the detection of squamous cell abnormalities with abnormal Pap smear test.

Methods: This cross-sectional study was performed on 1000 women with abnormal Pap smears in 2007-2018. Sampling was performed with simple method. All samples were subjected to an immediate assessment of colposcopy and histopathology if suspected. The checklist included demographic information as well as symptoms, cytopathology, colposcopy and histopathology findings. Data analysis was performed using descriptive and statistical analysis ($P < 0.05$).

Results: A significant relationship between histopathology and Pap smear findings was found ($P = 0.009$), also there was a significant correlation between histopathology and colposcopy findings ($P = 0.001$). However, there was no significant relationship between clinical symptoms and histopathology findings ($p = 0.8$). Sensitivity, specificity, positive and negative predictive value of Pap smear were 43%, 65.9%, 75.4%, 32.2% and of colposcopy were 74.7%, 39.5%, 75%, 39.1%, and of clinical symptoms were 72.6%, 28.1%, 71.1%, 29.7%, respectively.

Conclusion: Pap smear findings have the appropriate diagnostic accuracy in comparison with colposcopy and histopathology findings for screening and diagnosis of squamous intra-epithelial lesions. Also, there was higher sensitivity of colposcopy compared with Pap smear to detect cervical lesions. Therefore, it is advisable to use these methods simultaneously.

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Introduction

One of the most common cancers among women around the world is cervical cancer (1). Nearly 80% of cervical cancer cases occur in developing countries (2). Cervical cancer is the second most common cause of cancer-related death among women worldwide, with over 500,000 new cases diagnosed annually and about 50% mortality rate in Asia (3).

Based on a report by the National cancer registry center of Iran, the mean age specific incidence rate of cervical cancer was 2.5 in 100,000 individuals (range: 0.4 (Zanjan, Iran) - 4.1 (Fars, Iran)) and this cancer was the 2nd most common gynecological cancer among Iranian women (4,5).

Today, fortunately the prevalence of cervical cancer in Muslim countries, including Iran is less but the mortality rate is significant (6).

According to several studies, more than 80% of Iranian known cases of cervical cancer had been positive for Human papillomavirus (HPV) (7). HPV oncogene is a known risk factor for the development of cervical cancer (8), but there are other risk factors such as: smoking, promiscuous sexual behavior, sexually transmitted diseases, multi partnership, partner's sexual behavior, nutrition, socioeconomic level, genetic and patient's hormonal and immunological status (9). Thus, cervical cancer can be prevented by using the HPV