عنوان مقاله:

Role of Morphometry as Diagnostic Adjunct in Evaluating Premalignant and Malignant Cervical Cytology

محل انتشار:

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نویسندگان:

Sonia Hasija - *Department of Pathology, SHKM, GMC Nalhar, Nuh, Haryana, India*

Shivani Kalhan - *Department of Pathology, SHKM, GMC Nalhar, Nuh, Haryana, India*

Shilpa Garg - *Department of Pathology, SHKM, GMC Nalhar, Nuh, Haryana, India*

Puja Sharma - *Department of Pathology, SHKM, GMC Nalhar, Nuh, Haryana, India*

Pawan Singh - *Department of Pathology, SHKM, GMC Nalhar, Nuh, Haryana, India*

Bhawna Sethi - *Department of Pathology, SHKM, GMC Nalhar, Nuh, Haryana, India*

خلاصه مقاله:

Background: Malignant lesions of the cervix are the most frequent cause of mortality and morbidity and the third most common cause of cancer deaths in women worldwide. The incidence of cervical cancer is progressively reducing due to the routine use of Papanicolaou (Pap) smears to detect precancerous and early malignant lesions. Moreover, since it is based on subjective morphological assessment, false positive or negative reports are likely to be there. Using morphometric techniques, there have been attempts to use objective parameters to improve the accuracy of reports. In the present study, we used Image Morphometric Software and some of its plugins in order to create macro-images to analyze a large number of cells at a given time and study various nuclear parameters, useful in evaluating pre-malignant and malignant cervical Pap smears. Method: A retrospective study was done on abnormal Pap smears. Bethesda System was used for the categorization of cervical Pap smears into premalignant and malignant lesions. Nuclear parameters were calculated employing Image-Pro ۲.۰ Morphometric Software. The analyzed parameters included nuclear area, perimeter, radius, and compactness. The obtained results were statistically analyzed using SPSS software version ۱۹.۰. Results: Nuclear area, perimeter, radius, and compactness were found to be statistically significant parameters in differentiating premalignant from malignant cervical smears ($P < 0.05$). Conclusion: Nuclear morphometry was found to be a useful objective way and an adjunct to conventional microscopy in differentiating premalignant from malignant cervical lesions.

کلمات کلیدی:

Morphometric analysis, Cervical Pap Smears, Nuclear parameters

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