Can visual inspection with acetic acid be used as an alternative to Pap smear in screening cervical cancer?

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Objective: To evaluate the value of visual inspection with acetic acid (VIA) in screening cervical cancer in comparison to Pap smear.

Material & Methods: 200 women attending the Obstetrics and Gynecology department in Zagazig University Hospital from December 2011 to November 2012 were included. They were screened using Pap smear and VIA. Colposcopy was done for all women. Positive cases on any screening test were subjected to cervical biopsy.

Results: Acetic acid (VIA) was positive in 24/200 (12%) patients and Pap smear was abnormal in eight (4%). There were five LSIL, two HSIL and one with cells suspicious of malignancy. Colposcopy was recorded abnormal in 35 cases (17.5%). 18 cases (51.4%) had a Reid score of 0-2 and considered negative. 17 cases (48.6%) had a positive colposcopy (Reid 3-8). Cervical biopsy was done on all 35 cases. 44% biopsies were positive and 56% were negative. 15 positive biopsies were identified out of which 11 showed mild dysplasia, two moderate dysplasia, one severe dysplasia and one carcinoma in situ. The Pap smear had a sensitivity of 50.1%, specificity of 93.1%, and positive predictive value of 89.3% and negative predictive value of 65.6%. VIA had a sensitivity of 90%, specificity of 37%, and positive predictive value of 52% and negative predictive value of 81%.

Conclusion: VIA is a good screening, simple test, has low cost and high sensitivity in comparison to Pap smear. So, it can be used as alternative screening modality for cervical cancer in low resource locations.

Serum microRNA-21 expression as a prognostic and therapeutic biomarker for breast cancer patients

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miRNA-21 is recognized as the main active candidate and has high expression in many solid tumors consequential cell proliferation, differentiation, apoptosis and closely related to metastasis of disease. Study aimed to evaluate the serum miRNA-21 expression and therapy outcome in breast cancer patients and cell lines. 75 histopathologically confirmed newly diagnosed breast cancer patients were included in the study, before and after therapy patient's blood sample were collected and analysed serum microRNA-21 expression by quantitative real time PCR. In patients, 8.9 mean fold increased microRNA-21 expression was observed compare to controls. Increased expression was found to be associated with advanced stage (11.72 fold), lymph node involvement (11.12 fold) and distant metastases (20.17 fold). After treatment, significant decrease in miRNA-21 expression was observed and found to be significant (p<0.0001). Patients treated with neoadjuvant therapy had significant impact on miRNA-21 suppression and found to be significantly associated with different clinicopathological features of patients. Increased miRNA-21 expression was also found to be significantly associated with poor survival of breast cancer patients (p=0.002). microRNA-21 expression could be used as promising predictive indicators for breast cancer prognosis. microRNA-21 over-expression was associated with response to neoadjuvant therapy may perhaps be consider as primary treatment choice.

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