



## Study of conventional pap smear with emphasis on p16 marker in early diagnosis of premalignant and malignant lesions of cervix

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### Abstract

Cervical cancer is the second commonest cancer in India. Early detection of cervical cancer has significant improvement on patient survival, morbidity and also decreases economic burden on treatment cost. Screening for cervical cancer with conventional Pap smear (CPS) is still widely used investigation in low resource settings like India. In this study we are presenting CPS which includes non-neoplastic and neoplastic conditions. The non-neoplastic conditions like Candida, Bacterial vaginosis, Trichomoniasis, koilocytic atypia and malignancy are correlated with histopathology and p16 Immunohistochemical (IHC) marker where ever possible. The non-neoplastic inflammatory conditions cause disruption of the cervical microflora and discontinuity of cervical epithelium. This leads to increased susceptibility for oncogenic HPV. When HPV enters cervical epithelium, it remains dormant for prolonged period. As it enters replication, the E6, E7 genes cause inhibition of p53 and RB tumor suppressor genes respectively. This negative feedback of RB gene by E7 leads to increased expression of p16 (CDK inhibitor) in infected cells. The increased p16 immunoreactivity in epithelium shows HPV infectivity, such lesions have greater tendency to upgrade itself to carcinoma. Our study tries to substantiate the above principle of HPV infection leading to cancer with non-neoplastic conditions being cofactors. CPS is a good screening technique even with its limitations like obscuring factors which can be overcome by biopsy and p16 marker study. Thus, women in developing countries can be protected from precancerous and cancerous conditions of cervix by easy method like CPS.

### Biography

Gorantla Vamshi Vasanthi Raya has completed his MBBS in Nanjing Medical University, Nanjing, P R China. And now pursuing 2nd year pathology residency in JSS Medical college, a constituent of JSS AHER, Mysuru, India



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