Detection and typing of human papilloma virus DNA in cervical cancer with In situ hybridization method

M. Niakan (Ph.D.), 1 M.R.Jalali (M.D.), 2 M.Gilani (M.D.,Ph.D.), 3 S.Faghihzadeh (Ph.D.), 4 A.Garshashi (M.D.). 5
1- Assistant Professor of Microbiology Department, Faculty of Medicine, Shahed University, Tehran, Iran.
2- Assistant Professor of Pathology Department, Faculty of Medicine, Shahed University, Tehran, Iran.
3- Assistant Professor of OBS/GYN Department, Tehran Medical Science University, Tehran, Iran.
4- Assistant Professor of Biostatistics Department, Tarbiat Modarres University, Faculty of Medical sciences Tehran, Iran.
5- Assistant Professor of OBS/GYN Department, Faculty of Medicine, Shahed University, Tehran, Iran.

Abstract

Cervical cancer is one of the most frequently found cancers in women and appears to have a viral aetiology. Certain types of the human papillomavirus (HPV) are well established as the primary causes of cervical cancer. Clinical follow-up data, histopathologic diagnosis, In situ hybridization (ISH) and HPV DNA typing were available from 60 patients. ISH technique was performed with commercial biotinylated probes. The presence of 7 high risk HPV was evaluated in 60 cervical biopsies with squamous cell carcinoma (SCC) and Cervical Intraepithelial neoplasia (CIN) of different degrees by ISH. We analysed 60 biopsies from Iranian women. 42 of 60 (70%) carcinoma specimens were positive for HPV-DNA. HPV 31/33/51 (25%) was most frequently found, followed by HPV 16/18 (23.33%) and HPV 6/11 (21.66%) while HPV negative cases were 18(30%). High risk HPV types appear to be most frequently associated with SCC and CIN. ISH is a sensitive test in the detection and typing of HPV DNA both in clinical and latent infections.

Keywords: Cervical cancer, In situ hybridization, Pathology, Human papillomavirus.
Corresponding address: P.O. BOX-14155-7435, Department of Microbiology, Faculty of Medicine Shahed University Tehran, Iran.
Email: Niakan1@yahoo.com