

PROGNOSTIC SIGNIFICANCE OF THE HUMAN PAPILLOMA VIRUS DNA PRESENCE IN EARLY STAGE CERVICAL CARCINOMAS

Neli Baseska, George Stavric

Department of Histopathology and Clinical Cytology, Institute of Radiotherapy and Oncology, Medical Faculty, Skopje, Republic of Macedonia

Although the role of human papillomavirus in cervical carcinogenesis is reasonably well established, the attempts to determine the prognostic value of presence or absence of detectable human papillomavirus DNA and HPV type in cervical carcinoma have yielded conflicting results. The objective of our study was to assess the prognostic significance of the presence of HPV DNA in a fairly homogenous population of patients with early stage cervical carcinomas who underwent abdominal hysterectomy with pelvic lymphadenectomy as primary therapy. In this report the preliminary results of this larger study are presented by exploring the relationship of HPV presence to the recurrence rate and clinical and histopathologic features of 44 patients with cervical carcinoma.

Routinely processed formalin-fixed paraffin-embedded cervical carcinoma surgical specimens were examined for the presence of HPV DNA by in situ hybridization technique using mixed biotinylated probes to identify HPV types 6/11, 16/18 and 31/33/51. Clinical data and histopathologic features of these patients were analyzed retrospectively to determine their relation to presence or absence of HPV DNA. All the patients were staged according to the postoperative TNM classification of UICC (1987) guidelines. In our case series the tumor was limited to cervix in 24 (54.6%) patients, while local extension to vagina and parametrial tissues was found in 6 (13.6%) and 14 (31.8%) patients, respectively. Pelvic lymph node involvement was found in 15 (34%) patients. During the follow up period (range, 2-72, mean, 39 months), recurrences were observed in 6 patients.

HPV DNA was detected in 20 (45%) cervical carcinoma specimens. The prevalence rate of different HPV types was 34% (18) for HPV 16/18, 9% (4) for HPV 31/33/5, while HPV type 6/11 was detected only in one case of verrucous carcinoma. Recurrence rate in relation to the presence of HPV DNA exhibited a trend but was not statistically significant. Among the HPV DNA positive patients with cervical carcinoma the recurrence rate was 5% (1 case), compared to 21% (5 cases) for the HPV DNA negative group. Various clinical and histopathologic features of the patients with cervical carcinomas (tumor extent, grade, presence of regional lymph nodal metastases, histologic subtype, maximum depth of cervical stromal invasion, longitudinal tumor diameter, tumor-cervix area quotient, parametrial involvement, vaginal invasion, lymph-vascular space invasion, peri- and intra-tumoral lymphocytic infiltration, age) were also correlated with the presence of HPV. None of these factors was found to have statistically significant relationship to the presence of HPV DNA.

The preliminary results of our study are consistent with the observations reported by several other authors. The presence of HPV DNA appeared to be unrelated to recurrence rate and various histopathologic characteristics of well-known prognostic significance. However, having in mind the limited number of cases studied, as well as a lower sensitivity of in situ hybridization technique, an analysis of larger series, as well as introducing a more sensitive technique like PCR assay, will be necessary to determine whether the presence of HPV DNA and HPV type should be considered when planning treatment strategies and assessing prognosis in patients with early stage cervical carcinomas.