
DNA HR HPV IN CERVICAL CANCER TISSUE, IN SENTINEL AND OTHER PELVIC LYMPH NODES – A CORRELATION WITH HISTOPATHOLOGICAL AND IMMUNOHISTOCHEMICAL RESULTS

Jiří Sláma, David Cibula, Marcela Draždáková, Daniela Fischerová, Pavel Dundr, Michal Zikán, Pavel Freitag

General Teaching Hospital and 1st Medical Faculty of Charles University, Praha, Czech Republic

Background: Metastatic affection of pelvic lymph nodes is the most important prognostic parameter in early stages cervical cancer. Still, serious number of patients with negative pelvic nodes experience recurrence, majority of them are local in pelvis. High frequency positivity of DNA of the most common high risk (HR) genotypes HPV-16 and 18 was shown in histopathology-negative pelvic nodes, and is considered as subclinical metastatic spread. Limited data are available concerning presence of different HR genotypes and correlation between HR HPV DNA in sentinel lymph nodes (SLN), other pelvic nodes and the primary tumor. Prognostic significance of such findings is still uncertain.

Objectives: Main objective of the study was to evaluate the presence of HR HPV DNA including 13 genotypes in pelvic SLN, other pelvic non-SLN nodes and in the tumor.

Material and Methods: Enrolled were patients with early-stage cervical cancer referred for surgical treatment including systematic pelvic lymphadenectomy. During the surgery, samples for HR HPV assessment were taken from tumor tissue, sentinel node and the pelvic nodes. All samples were evaluated for the presence of HR HPV and genotyped for the main 13 genotypes.

Results: The study included 49 patients (FIGO IA2 – 2B) who underwent radical hysterectomy with systematic pelvic lymphadenectomy and sentinel lymph node biopsy. 91,8% patients had HR HPV DNA in their primary tumors, 49,9% patients in SLN and other pelvic nodes. In 1 case we found HR HPV DNA in pelvic nodes without positivity of SLN. We found 9 different genotypes of HR HPV in the examined tissue. There were 6 cases with histopathologically confirmed nodal metastases, all of them were also HR HPV DNA positive with agreement between genotype in the primary tumor, SLN and other pelvic nodes.

Conclusions: Our results show that the presence of HR HPV DNA in pelvic lymph nodes is an early sign of disease progression to the pelvis. Concordance between HPV genotype in the primary tumor and the involved pelvic lymph nodes is necessary.