HPV genotype in prognosis of Cervical Cancer

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We first established our methodology using SPF1/GP6+ PCR followed by hybridization with a genechip (Easychip® HPV Blot, King Car, Taiwan) for paraffin-embedded tissue. Consecutive patients treated for cervical carcinoma of International Federation of Gynecology and Obstetrics stage I–IV between 1993 and 2000 were included. A total of 2,118 patients were eligible for analysis. HPV DNA sequences were detected in 96.6% of the specimens, among which 82% harbored single-type and 18% contained multiple-type HPV sequences. The leading 5 were: HPV16 (50.0%), HPV18 (17.8%), HPV58 (16.3%), HPV33 (8.7%), and HPV52 (6.8%). The relation of HPV genotype to prognosis of invasive cervical cancer has been controversial. Our study offered a conclusion on (n=1067) this issue. By multivariate analysis, FIGO stage, lymph node metastasis, depth of cervical stromal invasion, grade of differentiation, and HPV 18-positivity were significantly related to cancer relapse. FIGO stage II, deep stromal invasion, parametrial extension, HPV 18-positivity, and age older than 45 were significant predictors for death. Using the seven selected variables from either recurrence-free or overall survival analysis, death and relapse predicting models classifying three risk groups (low-risk, intermediate-risk, and high-risk) were constructed and endorsed by internal validation. The prognostic models could be useful in counseling patients and stratifying subjects in future clinical trials. Among the 992 patients treated with primary radiotherapy, the high-risk group consisted of the patients without HPV infection or the ones infected with the alpha-7 species only in addition to stage, lymph node metastasis, histologic type and squamous cell carcinoma antigen.

Biography

Dr. Chyong-Huey Lai is Professor of Obstetrics and Gynecology, Chang Gung Memorial Hospital (CGMH) and Chang Gung University, Taoyuan, Taiwan. CGMH has 7 hospitals with more than 10,000 beds and serves one-tenth of the whole Taiwanese population. Under her leadership, the Gynecologic Cancer Research team of CGMH engaged in many clinical and basic researches for improving management of gynecologic cancer care and in translational researches. She serves several editorial boards, such as “Gynecologic Oncology” (2005-present) and “International Journal of Gynecological Cancer” (2001-2008). She was awarded with 2007 and 2010 Excellence Research Award, National Science Council, Taiwan.