

Affect of Human Papilloma Virus(HPV) Expression on Clinical Course of Laryngeal Papilloma

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Objectives : Laryngeal papilloma is the most common benign laryngeal tumor. Although pathogenesis of laryngeal papilloma has been much understood until now, its high recurrence rate and unpredictable nature is still a problem to solve. Human papilloma virus (HPV) is assumed to be the main causative agent of this disease. In this study, we investigated the expression of whole genotypes of HPV through cases of laryngeal papilloma and correlated their expression with clinical course of disease.

Method : Seventy cases of laryngeal papillomas were evaluated for the HPV genome presence by the technique of in situ hybridization using wide spectrum HPV DNA probe. Fifty cases of laryngeal polyps were also tested as the control group. Etiologic associations were analyzed between the two groups. According to the expression of HPV genome, cases were subdivided and specific types of HPV infection were determined by DNA in situ hybridization using type-specific HPV DNA probe (HPV6,11,16,18,31,33). Separate analy-

ses were conducted comparing viral types, average number of procedures and duration of disease free period.

Results : We detected HPV DNA in forty of the seventy laryngeal papilloma cases (57%). There were significant associations between HPV and laryngeal papilloma ($p < 0.01$). Among the HPV positive cases, major specific types were HPV 6/11 (97%). Significant associations were noted between viral expression and clinical course, also (Disease free duration ; HPV(+) group : HPV(-) group=4.9months : 11.3 months ($p < 0.05$), Recurrences per 3years; HPV(+) group : HPV(-) group=5.3 times : 2.3 times ($p < 0.05$)).

Conclusion : Our observations suggest that HPV 6/11 were the main causative agent of laryngeal papilloma and that detection of active HPV DNA expression may be helpful in identifying patients with aggressive recurrent laryngeal papillomas. Also it may confer the rationale of combined anti-viral therapy for aggressive laryngeal papilloma.