

عنوان البحث باللغة الانجليزية ::

Detection of human papilloma virus-DNA in sinonasal inverted papilloma by PCR

Abstract:

Background: The exact etiology of inverted papilloma (IP) is still unclear. Studies using in situ hybridization (ISH) and polymerase chain reaction testing (PCR) have detected HPV in up to 86% of IPs. But other various factors such as smoking have also been implicated. Mostly HPV-6, 11, 16 and 18 have been found to be correlated with IP. The presence of HPV-DNA in IP have been found to be associated with higher chance of recurrence and malignant transformation. Several methods are used for HPV detection includes ISH, PCR, immunohistochemical (IHC) staining for P16 protein and others. Till now PCR is the most accurate method as it is a highly sensitive, widely-available and cost-effective. **Objective:** This study aims to detect HPV-DNA and its subtypes in sinonasal IPs specimens by PCR. **Study design:** A prospective case control study. **Methodology:** The study included 26 patients, 21 cases presented unilateral nasal mass that was proved pathologically to be IP and 5 controls. IP was managed in all cases by endoscopic medial maxillectomy. Two sections at least were taken from the specimen. One section was stained by Hematoxylin and Eosin (H&E) for pathological confirmation and the other was used for PCR. Patients were followed up for 12 months to detect recurrence and malignant transformation. HPV-DNA was extracted from tissue samples and was detected by PCR amplification using consensus primers (My09, My11). Each HPV-DNA was examined separately for the genotype 6, 11, 16, 18 by specific primer. **Results:** Inverted papilloma was detected in 76.2% of cases (n=16), exophytic papilloma in 9.5% (n=2) while oncocytic papilloma was detected in 14.3% (n=3) of cases. Squamous type represented 9.5% (n=2). Intermediate (transitional or cuboidal) type represent 28.6 (n=6) while the mixed types possess the highest percentage; 61.9% (n=13). HPV-DNA was detected in 28.6% (n=6) out 21 cases of IP, while none of the controls demonstrated HPV-DNA. Using PCR, 14.3% (n=3) of the positive cases was positive for HPV-6, 9.5% (n=2) was positive for HPV-11 and 4.8% (n=1) was positive for HPV-18. Recurrence was noted in 4.7% (n=1) of cases during follow up period as proved by biopsy. While, no malignant transformation was noticed. **Conclusion:** HPV could be detected in 28.5% of IP with subtypes 6, 11 and, 18. The correlation of HPV and IP is not fully understood. So, the etiology of inverted papilloma is still unclear and, need

more researches and more number of cases with another method of detection which may be more accurate such as E6, E7 mRNA.