

A cross-sectional study on Sinonasal inverted Papilloma: does human Papilloma virus play a role in its etiology?

ABSTRACT

Aims: To correlate the HPV genotypes with recurrence of disease and malignant transformation. **Methods:** A prevalence cross-sectional study. The tumour tissue was isolated from the paraffin-embedded tissue (PET). The DNA was extracted from the tissue using the QiAamp DNA Mini Kit (Qiagen, Germany). Gel electrophoresis was performed to determine the presence of genomic DNA. HPV detection and genotyping were carried out using SACACE HPV High Risk and Low Risk Typing Real-TM kit (SACACE, Italy). Two different types of kits were used, that is HPV 6,11 Real-TM and HPV 16,18 Real-TM kits. **Results:** A total of 44 patients, 36 were male and 8 were female with a ratio of 5:1. 61.4% was Malay, 22.7% was Chinese, 11.4% Indian 4.5% other races. 15 out of 44 patients had HPV positive (34%). The recurrence rate of positive HPV infection compared to negative HPV was not statistically significant ($p>0.05$). There was a significant correlation of HPV 16 and 18 infection with malignant transformation ($p<0.05$). A high detection rate of a high-risk HPV type (67%) was observed in patients with inverted papilloma with malignant transformation. **Conclusion:** The prevalence of HPV in inverted papilloma is 34%. Our result supports that HPV infection is an aetiological factor in sinonasal inverted papilloma. A high-risk HPV plays a role in the oncogenesis of sinonasal inverted papilloma. Further studies should be conducted to further elaborate this relationship.