

Human Papilloma Virus (HPV) Awareness in Patients with Oral Ulcers: A Cross-Sectional Survey

Dr Kriti Shrivastava; Dr Ajita Singh; Dr Hina Handa

Dept.Oral Medicine and Radiology, Rishiraj College of Dental Sciences & Research
Centre, Bhopal, Madhya Pradesh, India

Dept.Oral Medicine and Radiology, Peoples Dental Academy, Bhopal, Madhya
Pradesh, India

Corresponding Author: **Dr Kriti Shrivastava**

DOI 10.5281/zenodo.16847002

Abstract

Background: Human papillomavirus (HPV) is implicated in oropharyngeal cancers and potentially in some oral ulcers. Public awareness regarding this link remains limited/ inadequate. **Objective:** To assess awareness of HPV and its potential oral health implications among patients presenting with oral ulcers. **Methods:** A structured questionnaire was administered to 60 patients with oral ulcers in Oral Medicine & Radiology Department of Rishiraj College of Dental Sciences and Research Centre. **Results:** Only 18.3% of participants were aware that HPV could affect the oral cavity. Awareness was significantly higher among younger and more educated individuals. **Conclusion:** There is a major gap or lack in public knowledge about HPV's role in oral health. Awareness and Educational campaigns targeting oral and systemic implications of HPV are necessary.

Key Words: Human Papilloma Virus, Oral Ulcers, Oral Cancer

Introduction

Human papillomavirus (HPV) is widely recognized for its role in cervical cancer, but high-risk HPV strains typically 16 & 18 are also implicated in oro- pharyngeal and more so in oral cavity carcinogenesis or malignancies (Gillison, M.L et al;2000 ; Ragin, C.C.,Taioli, E.; Weissfeld, J.L., 2007). The transmission of HPV via oral-

genital contact and its possible contribution to persistent oral lesions such as non-healing ulcers or papillomas raises concern, especially in light of rising oral cancer rates. Despite the growing scientific evidence, public understanding of HPV's oral implications remains poor. This study assesses HPV awareness among patients presenting with oral ulcers, a symptom that may warrant consideration of viral etiologies (Chaturved,AK et al;2011).

Materials and Methods

Study Design: A Cross-sectional offline survey was performed in the Department of Oral Medicine and Radiology, Rishiraj College of Dental Sciences and Research Centre from 1 January 2025–30 April 2025 after obtaining the institutional ethical clearance. The following eligibility criteria was used 1a.

Inclusion Criteria: Patients aged 18–65 years Presenting with one or more oral ulcers(recurrent, idiopathic, or persistent for >2 weeks)

1b.Exclusion Criteria: Patients with known traumatic ulcers or Aphthous stomatitis only History of HPV vaccination

2.Tool: A prevalidated questionnaire with 12 items, including:

- a. Awareness of HPV
- b. Knowledge of oral transmission
- c. Association with oral ulcers or cancer
- d. Awareness of HPV vaccination

3.Data Analysis: Descriptive statistics and chi-square test for subgroup comparisons.

Results

1.Demographics (Table 1):

- a. Total participants: 60 (34 males, 26 females)
- b. Mean age: 36.7 years
- c. Education: 40% secondary, 35% graduate, 25% no formal education

Table 1: Demographic Characteristics of Participants (n = 60)

Demographic Parameter	Value
Total participants	60 (34 males, 26 females)
Mean age	36.7 years
Education - Secondary	40%
Education - Graduate	35%
Education - No formal education	25%

2. Awareness Findings (Table 2)

a. Heard of HPV: 42% (n = 25)

b. Knew HPV could affect the mouth/oral cavity: 18.3% (n = 11)

c. Awareness of oral cancer risk from HPV: 15% (n = 9)

b. Knowledge of HPV vaccine: 30% (n = 18), but only 3 had been vaccinated

Awareness was significantly higher ($p < 0.05$) in patients under 35 and those with a graduate-level education.

Table 2: Awareness of HPV in Patients with Oral Ulcers (n = 60)

Survey Question	Response	Percentage (%)
Heard of HPV	25	42.0%
Knew HPV could affect the oral cavity	11	18.3%
Aware of oral cancer risk from HPV	9	15.0%
Knew about the HPV vaccine	18	30.0%
Already vaccinated	3	5.0%
Awareness higher among age <35	Yes (stat. significant)	–
Awareness higher in graduate-level education	Yes (stat. significant)	–

Discussion

The results reveal a substantial lack of awareness about HPV's role in oral health, even among patients already experiencing oral ulcers. While a moderate proportion had heard of HPV, most associated it exclusively with cervical cancer (Chung, S-Y; 2022).

HPV-related oral lesions, including ulcers, papillomas, and potentially premalignant changes, require increased public and professional awareness (Pirmoradi, Z; 2024). Primary dental visits present a critical opportunity to educate patients and initiate preventive discussions, including vaccination.

This study also highlights the need for inclusion of oral health messaging in broader HPV awareness campaigns, which currently focus largely on genital manifestations.

Conclusion

HPV awareness in patients with oral ulcers is strikingly low, particularly regarding its role in the oral cavity. Dental professionals should play an active role in educating patients about HPV risks and promoting preventive measures, including vaccination and regular screening.

References:

1. Chaturvedi, A.K., Engels, E.A., Pfeiffer, R.M., Hernandez, B.Y., Xiao, W., Kim, E., Jiang, B., Goodman, M.T., Sibug-Saber, M., Cozen, W. and Liu, L., 2011. Human papillomavirus and rising oropharyngeal cancer incidence in the United States. *Journal of Clinical Oncology*, 29(32), pp.4294–4301.
2. Chung, S.-Y., Teo, I.-H., Lieu, W.-H., Khoo, C.-L. & Koh, C.-H., 2022. The prognostic value of human papilloma virus infection in oral cavity squamous cell carcinoma: a systematic review and meta-analysis. *Laryngoscope*, 132, pp.1760–1770.
3. Pirmoradi, Z., Nazari, K., Shafiee, N., Nikoukar, N., Minoo, S., Ghasemi, H., Ghanbarikondori, P. & Allahyartorkaman, M., 2024. Oral cancer and HPV: review article. *Asian Pacific Journal of Cancer Biology*, 9(1), pp.87–95
4. Gillison, M.L., Koch, W.M., Capone, R.B., Spafford, M., Westra, W.H., Wu, L., Zahurak, M.L., Daniel, R.W., Viglione, M., Symer, D.E. and Shah, K.V., 2000. Evidence for a causal association between human papillomavirus and a subset of head and neck cancers . *Journal of the National Cancer Institute*, 92(9), pp.709–720.
5. Ragin, C.C., Taioli, E. and Weissfeld, J.L., 2007. HPV-associated head and neck cancers: a virus-related cancer epidemic. *The Lancet Oncology*, 8(12), pp.975–977.