Update on HPV Vaccine and Prevention of HPV-Associated Head and Neck Cancer

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BACKGROUND

Human Papillomavirus (HPV) associated head and neck cancers (HNC) make up about 25% of oral cancers and nearly 70% of cancers of the oropharynx. It is established that HPV infection is a significant risk factor for head and neck cancers. With HPV-associated HNC on the rise, it is critical for oral health professionals to inform their patients on preventative strategies. Evidence-based research has shown that vaccination has the greatest likelihood to prevent HPV-positive HNC, especially oropharyngeal cancer (OPC). Therefore, management of risk factors and information relating HPV vaccine can provide preventative care for patients at risk.

INTRODUCTION

With the lack of dental screenings and secondary prevention techniques, prophylactic vaccination has the greatest potential to prevent HPV-positive HNC. There are currently three vaccines commercially available named Cervarix, Gardasil-4, and Gardasil-9. Cervarix is a bivalent vaccination, while Gardasil-4 is a quadrivalent vaccine. Cervarix provides protection from two high-risk HPV types (HPV types 16 and 18), Gardasil-4 is designed to protect against HPV6, HPV11, HPV16, and HPV18. Gardasil-9, the newest vaccination, is a 9-valent vaccine, protecting against even more types of HPV (HPV types 6, 11, 16, 18, 31, 33, 45, 52, and 58).

METHODS

Current evidence lacks information regarding the newest vaccine, Gardasil-9, and how to recommend these vaccines to patients. Evidence-based research has shown that dental providers are the most seen health provider; therefore communication is key.

DISCUSSION

• There has been recent discussion to pull out Cervarix and Gardasil-4 from the market and keep Gardasil-9 as the sole vaccine.
• Due to the broader protection range of the vaccine, it can prevent infection of associated-HPV types, associated cancers, and pre-cancerous lesions. It can prevent over 90% of HPV infections.
• While there are mild side effects, evidence shows that Gardasil-9 was well-tolerated. Most common adverse events included swelling and erythema to the injection site, headaches, and fever.
• This second-generation vaccine has also proven to be cost-effective for any age group, specifically in the United States, compared to the first-generation vaccines.

CONCLUSION

• As evidence shows, these existing vaccines reduce HPV infections; therefore these vaccines will potentially decrease the incidence of HPV-associated HNC.
• Since many primary care activities are performed in the dental office, oral health professionals could mention this chairside.
• The dental professional could also help to improve compliance with HPV vaccination recommendations.
• Continuing Education courses, dental programs, and dental hygiene curriculums should be part of the oral health professional resource to continue to prepare providers to discuss the HPV vaccine with patients.

REFERENCES