

HIV infection-related stigma and oral lesions: an update and new perspectives

Learning outcomes

- To recognise and discuss the factors of stigma, discrimination, and criminalisation related to people living with HIV/AIDS;
- to describe and recognise the significance of oral and maxillofacial lesions within the context of HIV infection; and,
- to promote awareness about stigma and oral lesions related to HIV infection.

Introduction

Despite advances, the HIV epidemic remains a significant public health challenge. According to the Joint United Nations Programme on HIV/AIDS (UNAIDS), 38 million people worldwide were living with HIV/AIDS at the end of 2019.¹ Recent data have revealed that about 105,200 people are living with HIV infection in the UK.² Approximately 7,200 people live with HIV in the Republic of Ireland and recent substantial increases in the rate of new diagnoses saw the highest number ever recorded in 2016. At present, the notification rate is 11.0 per 100,000 of population, significantly higher than the European Union average of 6.2. These increases have occurred in the context of considerable social stigma regarding HIV.³ This suggests that more effort is needed to control the spread of the virus, particularly in vulnerable populations.¹⁻⁸ In addition, stigma, discrimination and criminalisation of this population preclude their access to HIV/AIDS services, including oral healthcare and the management of oral and maxillofacial manifestations in HIV-positive patients.^{4,7,8}

Treatment of HIV infection

Treatment for HIV infection has become available over the years, and there have been significant advances in the management of the condition. There are highly effective treatments available that can control the virus, suppress its replication, and allow people with HIV to live long and healthy lives. As such, antiretroviral therapy (ART), a combination of different antiretroviral drugs that target different stages of the HIV replication cycle, is the most widely used.^{9,10} Improving access to ART and providing adherence support are important factors to consider in addressing barriers to care.⁹⁻¹¹

Oral and maxillofacial lesions are commonly observed in individuals living with HIV/AIDS and their presence can provide valuable information about disease progression. Additionally, it is important to consider the potential long-term side effects of ART, such as lipodystrophy and lipoatrophy, which can further



FIGURE 1: Hyperpigmentation due to the use of antiretroviral therapy in HIV-positive patients.

contribute to oral health complications.^{11,12} Some ART can cause side effects that affect the oral cavity, including hyperpigmentation (Figure 1), xerostomia (dry mouth), taste alterations, and mucosal changes.¹³

Oral and maxillofacial lesions within the context of HIV infection

HIV-infected individuals are more susceptible to infections that affect the oral and maxillofacial region.¹³ Previous studies have reported that 70-90% of HIV-positive patients exhibit oral lesions during the different stages of the disease.^{14,15} It is important to highlight that oral and maxillofacial changes have been associated with long duration of combined ART, detectable viral load, and duration of HIV infection over 20 years.⁸

Oral candidiasis, commonly known as thrush, is the most common opportunistic infection affecting these individuals.¹⁶ This condition arises from the overgrowth of *Candida spp.* and can present as white or erythematous lesions, varying in terms of appearance and underlying causes. It is often accompanied by pain, discomfort and a burning sensation, particularly during the consumption of spicy or acidic foods.¹⁶ The most common form of oral candidiasis is the acute



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FIGURE 2: Pseudomembranous candidiasis presenting as creamy-white, curd-like patches on the palate.

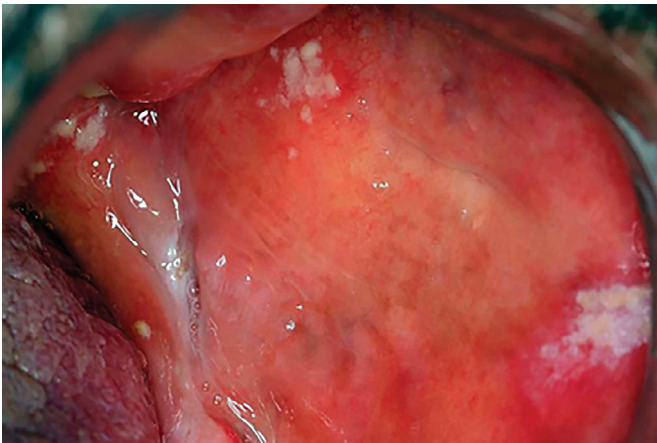


FIGURE 3: Pseudomembranous candidiasis displaying removable white plaques that leave a red surface and right inner cheek.



FIGURE 4: Erythematous candidiasis, characterised by red patches on the tongue, which may appear smooth or have a speckled or 'geographic' pattern.



FIGURE 5: Angular cheilitis observed at the lip commissure.



FIGURE 6: Oral hairy leukoplakia, a hyperkeratotic lesion, presented as non-removable white plaques with a corrugated appearance, located at the left lateral border of the tongue.

pseudomembranous type (Figures 2 and 3). Red lesions include acute and chronic erythematous candidiasis (Figure 4), and angular cheilitis, which involves inflammation and cracking of the corners of the mouth (Figure 5). The diagnosis of oral candidiasis is based on clinical examination, medical history, cytology, and assessment of risk factors. Mild cases of oral candidiasis can generally be resolved with topical antifungal therapy and oral hygiene measures. Systemic antifungal therapy may be used in patients who do not respond to topical treatment, cannot tolerate it, or are at higher risk of developing systemic infections. These various forms of oral candidiasis highlight the importance of a timely diagnosis and appropriate management for individuals living with HIV/AIDS. Concurrent management of underlying HIV infection through ART is crucial to restore immune function and prevent recurrent episodes of oral candidiasis.^{16,17}

Oral hairy leukoplakia, primarily associated with Epstein-Barr virus (EBV) infection and frequently observed in individuals with HIV/AIDS, is a hyperkeratotic lesion, presenting as non-removable white plaques with a corrugated appearance, which predominantly affect the tongue (Figure 6).^{12,13} The primary approach focuses on managing the underlying immunosuppression. It is important to note that the treatment approach may vary depending on the individual's general health status, immune function, and specific clinical presentation.^{12,13}

Kaposi's sarcoma is caused by the human herpesvirus/Kaposi sarcoma herpesvirus (HHV-8) and is the most common malignancy associated with HIV infection.¹⁷ Lesions may appear as flat or slightly raised patches resembling a

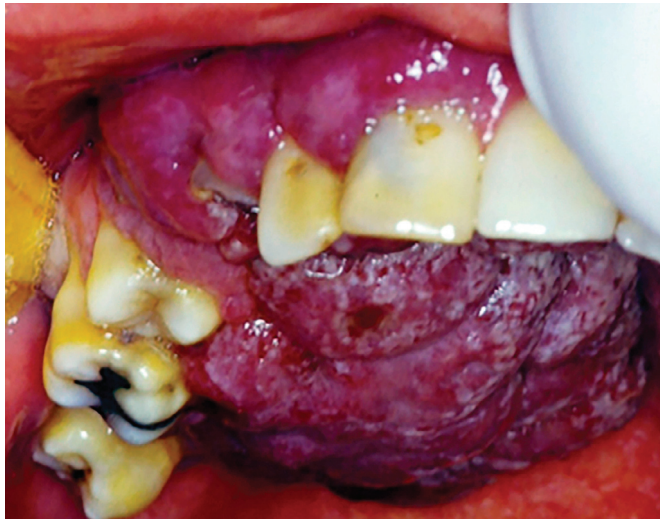


FIGURE 7: Kaposi's sarcoma presented as a reddish-purple, lobulated tumour on the right palate, involving all the right upper teeth.



FIGURE 8: Condyloma acuminatum on the mucosa of the upper lip in a HIV-positive patient.

bruise, nodules or tumors, exhibiting a distinct reddish-purple color (Figure 7).¹⁷ Treatment approaches may include ART, surgical excision, radiotherapy, or chemotherapy. Effective ART has shown significant success in reducing the occurrence of new cases of Kaposi's sarcoma associated with HIV/AIDS.¹⁷ Salivary gland diseases associated with HIV/AIDS encompass a range of disorders. Benign lymphoepithelial cysts are the most common manifestations. They usually develop in the salivary glands, and cause swelling and discomfort.¹⁸ ART has a positive effect on HIV-related salivary gland diseases and can help alleviate symptoms and improve overall oral health.¹⁸ Human papillomavirus (HPV) infections are frequently seen and pose additional challenges. An impaired immune system increases the risk of acquiring HPV and promotes persistent infections with multiple HPV types (e.g., 16 and 18), which are strongly associated with several types of cancers.¹⁹ The most commonly recognised benign clinical manifestations of HPV infection include oral papilloma, condyloma acuminata (Figure 8), and focal epithelial hyperplasia. Treatment includes topical therapies, surgical removal, and other interventions to control symptoms and reduce the risk of transmission.¹⁹

HIV stigma in dental care

The stigmatisation surrounding HIV infection continues to present a significant

obstacle for people living with HIV/AIDS, which can have a detrimental impact on their quality of life (QoL), health, and general well-being.^{20,21} Stigma associated with HIV infection has changed over the years, as evidenced by research, which found that most people living with HIV/AIDS believe that stigma and discrimination were more prevalent in the past. Some authors have suggested that education, clinical experience, and easily accessible information might have contributed to reducing stigma.²²

Signs of discrimination include dentists wearing two pairs of gloves and double masks as an extra precautionary measure.^{20,22} Moreover, individuals have reported that dentists avoid making eye contact.²⁰ Participants also noted that their HIV status led dental professionals to assume that they were drug users and they experienced negative comments about their health,²⁰ which further contributed to discriminatory behaviour. Furthermore, scheduling dental appointments at the end of the day has been identified as a discriminatory practice.²⁰

It is possible that sexual stigma (e.g., homophobia) may hinder access to HIV services and serve to justify criminalisation of homosexual behaviour. In this way, sexual stigma and criminalisation inspire fear among men who have sex with men, forcing those who disclose their sexual behaviour to healthcare providers to risk blackmail, imprisonment, violence, or ostracism.²³

How can dental professionals be trained to provide non-judgmental care to HIV-positive patients?

Implementing interventions could promote a supportive relationship between dentists and people living with HIV/AIDS.²⁴ This approach aims to ensure equal access to dental treatment while avoiding outdated discriminatory clinical practices. With this perspective in mind, we emphasise the importance of providing training for dental staff that includes strategies for supporting patients after their HIV status is revealed. These strategies may include ensuring confidentiality, using non-discriminatory language, and providing flexible appointment scheduling.²⁰ It is also imperative to include special care dentistry as an integral part of the dental curriculum and incorporate stigma-reducing activities and cultural competency training.²⁰

To facilitate patient motivation, process improvement strategies should be implemented, such as providing transportation support, case management, incentives, and trust building.²⁵ Also, public health and health promotion efforts must actively engage with people living with HIV/AIDS to demonstrate that the dental community is responsive and evolving, ensuring that these individuals feel fully supported in accessing and receiving dental care.²⁰

Recommendations for oral health providers

Adherence to recommended infection control practices remains a crucial aspect of dental practice. Dental personnel should consistently wear barrier equipment (e.g., gloves, masks, and protective glasses) whenever there is a potential for contact with body fluids, non-intact skin, or mucous membranes.²⁴

The principles of standard precautions encompass several essential elements including: thorough handwashing; appropriate management of healthcare waste; proper handling and disposal of needles and sharps; implementation of engineering controls and work practice controls for all sharps; adherence to safe injection practices; effective cleaning, decontamination and sterilisation of equipment and instruments; and, the use of appropriate disinfecting agents.²⁴

Dental treatment planning should be conducted on an individualised basis, considering consultations with the patient and contact with his/her physician.

For instance, if a patient has a reduced platelet count of less than 60,000 cells/mL, which can impact clotting, or a white blood cell neutrophil count below 500 cells/mL, which may require antibiotic prophylaxis, adjustments to the treatment plan may be needed.²⁴ This collaboration between dentist and physician ensures comprehensive and tailored care for the patient.

Conclusion

Addressing HIV stigma is imperative to ensuring adequate healthcare for people living with HIV/AIDS. Collaborative efforts between public health initiatives and individuals living with HIV/AIDS are essential to shaping an accessible, supportive, and stigma-free landscape for dental care.

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