

ORALNO STANJE KOD PACIJENATA SA HIV INFEKCIJOM -Usna duplja i HIV-

ORAL CONDITION IN PATIENTS WITH HIV INFECTION - Oral cavity and HIV -

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ABSTRAKT

Oralna stanja povezana sa HIV infekcijom, javljaju se kod velikog broja pacijenata i često su pogrešno dijagnostikovana ili neadekvatno lečena. Dentalno ispitivanje je potrebno radi odgovarajućeg tretmana oralnih manifestacija HIV infekcije ili SIDE, ali mnogi pacijenti ne dobijaju adekvatnu dentalnu negu. Česta oralna stanja povezana sa HIV infekcijom uključuju kserostomiju, kandidozu, vlasastu leukoplakiju, parodontalna oboljenja kao što su linearni gingivalni eritem i ulero-nekroznii parodontitis, Kapošijev sarkom, Non-Hočkin-ov limfom, bradavice iz grupe humanih papiloma virusa, i ulcerozna stanja uključujući lezije herpes virusa i rekurentne aftozne ulceracije. Ovaj rad predstavlja najčešće oralne manifestacije HIV infekcije.

Ključne reči: oralno stanje, HIV infekcija, bakterijska infekcija, virusna infekcija, gljivična infekcija

ABSTRACT

HIV-related oral conditions occur in a large proportion of patients, and frequently are misdiagnosed or inadequately treated. Dental expertise is necessary for appropriate treatment of oral manifestations of HIV infection or AIDS, but many patients do not receive adequate dental care. Common HIV-related oral conditions include xerostomia, candidosis, oral hairy leukoplakia, periodontal diseases such as linear gingival erythema and necrotizing ulcerative periodontitis, Kaposi's sarcoma, Non-Hodgkin's lymphoma, human papilloma virus-associated warts, and ulcerative conditions including herpes simplex virus lesions and recurrent aphthous ulcers. This article presents a common oral manifestations of HIV disease.

Key words: Oral condition, HIV infection, bacterial infection, viral infection, fungal infection, neoplasms, AIDS

Uvod

HIV je skraćenica za virus humane imuno-deficijencije. To je retrovirus koji se sastoji iz ribonukleinske kiseline (RNK). Ovaj retrovirus sadrži specijalni virusni enzim koji se zove reverzna transkriptaza, koja dozvoljava virusu da pređe iz RNK oblika u DNK oblik, a zatim se integrisati i preuzeti celi ćelijski genetički materijal. Kada ga jednom preuzme, nova ćelija – sada HIV inficirana – počinje da stvara nove HIV retroviruse i uništava T-helper ćelije, koje su glavna odbrana domaćina protiv bolesti.¹

AIDS je skraćenica za sindrom stečenog gubitka imuniteta. Generalno se pojavljuje kada broj CD₄ ćelija padne ispod 200/ μ L i karakteriše se pojavojm oportunističkih infekcija.² AIDS

Introduction

HIV is abbreviation for the Human Immunodeficiency Virus. It is a retrovirus which consist of Ribonucleic Acid (RNA). They contain a special viral enzyme called Reverse Transcriptase, which allows the virus to convert its RNA to DNA and then integrate, and take over, a cell's own genetic material. Once taken over, the new cell - now HIV infected - begins to produce new HIV retroviruses and kills the helper T cells, which are the host's main defense against illness.¹

AIDS is abbreviation for Acquired immunodeficiency syndrome. It generally occurs when the CD₄ count is below 200/mL and is characterized by the appearance of opportu-

je infektivni sindrom izazvan prisustvom limfoneutropičnog virusa u krvi, cerebospinalnoj tečnosti, pljuvački, bronhijalnim i vaginalnim sekretima, suzama i semenoj tečnosti.³ Sistemske manifestacije AIDS-a se često pomenuju u literaturi.^{4,5,3} Oralne manifestacije su takođe česte i mogu predstavljati rane kliničke znake bolesti, koje često prate sistemske manifestacije. Ovaj aspekt je veoma važan zato što prikazuje odgovornost stomatologa u pogledu ranog otkrivanja oralnih lezija koje mogu nagovestiti HIV infekciju.

Procenjeno je da 90% ljudi sa HIV virusom ima najmanje jednu oralnu manifestaciju u neko vreme trajanja infekcije.⁶ Zbog toga je neophodno dentalno ispitivanje radi odgovarajućeg treatmana oralnih komplikacija kod HIV infekcije ili AIDS-a. Lekari treba da prepoznaju oralna oboljenja koja su povezana sa HIV-om i da preporuče odgovarajuću medicinsku negu. Faktori koji dovode do oralnih stanja vezanih za HIV uključuju: broj CD₄ ćelija manji od 200/ μ L, plazma nivoje HIV-RNK veće od 3000 kopija/ml, kserostomiju, lošu oralnu higijenu i pušenje.^{7,8,9}

Za osobe sa nepoznatim HIV statusom, oralne manifestacije mogu predstavljati moguću HIV infekciju, mada one nisu simptomi infekcije. Za osobe koje žive sa HIV virusom, a koje još nisu na terapiji, prisustvo određenih oralnih manifestacija može signalizirati progresiju HIV infekcije. Za pacijente koji su na antiretrovirusnoj terapiji, prisustvo oralnih manifestacija može signalizirati povećanje plazma nivoa HIV-1 RNK.

Do danas je zabeleženo preko 30 različitih oralnih manifestacija HIV oboljenja od pojave AIDS-a. Ovaj članak će se zadržati na nekoliko najčešćih oralnih zdravstvenih problema.

Gljivične infekcije

Najčešća gljivična infekcija udružena sa HIV infekcijom je orofaringealna kandidoza. Organizam koji je odgovoran za nastanak kandidoze je *Candida albicans*. Najčešće su ispitivane tri forme oralne kandidoze i to: pseudomembranozna kandidoza, eritematozna kandidoza i angularni heilit.

Pseudomembranozna kandidoza javlja se kao kremasta, bela naslaga bilo gde u usnoj duplji (Sl.1). Ove naslage se mogu ukloniti, ostavljajući crvene i krvave površine ispod

nistic infections.² AIDS is an infectious syndrome caused by a lymphoneurotropic virus in blood, cerebrospinal fluid, saliva, bronchial and vaginal secretions, tears, and semen.³ Systemic manifestations of AIDS are frequently reported in the literature.^{4,5,3} Oral manifestations are also common and may represent early clinical signs of the disease, often preceding systemic manifestations. This aspect is particularly important because it shows the importance of dentists and their responsibility for early detection of oral lesions which may indicate HIV infection.⁵

It has been estimated that 90% of people with HIV disease will present with at least one oral manifestation at some time during the course of their infection.⁶ Dental expertise is necessary for proper treatment of oral complications in HIV infection or AIDS. Medical clinicians should be able to recognize HIV-associated oral disease and to provide appropriate medical care. Factors that predispose to HIV-related oral conditions include CD₄⁺ cell count of less than 200/ μ L, plasma HIV-RNA levels greater than 3000 copies/mL, xerostomia, poor oral hygiene, and smoking.^{7,8,9}

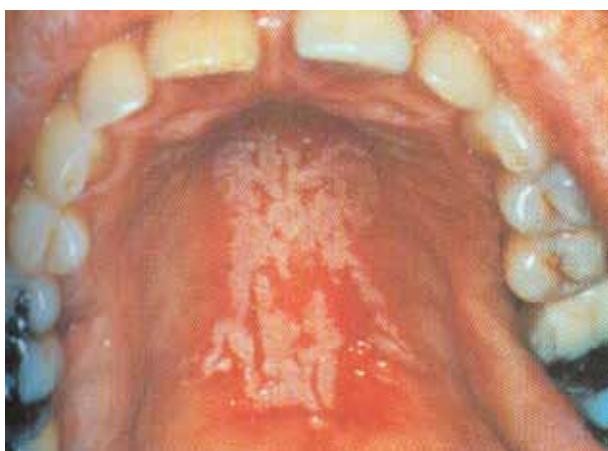
For individuals with unknown HIV status, oral manifestations may suggest possible HIV infection, although they are not diagnostic of infection. For persons living with HIV disease who are not yet on therapy, the presence of certain oral manifestations may signal progression of HIV disease. For patients on antiretroviral therapy, the presence of certain oral manifestations may signal an increase in the plasma HIV-1 RNA level.

Over 30 different oral manifestations of HIV disease have been reported since the beginning of the AIDS epidemic. This article will address several of the most common of these oral health issues.

Fungal infection

The most common fungal infection seen in association with HIV infection is oropharyngeal candidosis. The organism involved with the presentation of Candidosis is *Candida albicans*. There are 3 frequently observed forms of oral candidosis: pseudomembranous candidosis, erythematous candidosis, and angular cheilitis.

Pseudomembranous candidosis appears as creamy, white plaques that can be present anywhere in the mouth (Fig.1). The plaques can be



*Sl.1. Pseudomembranozna kandidoza
Fig 1. Pseudomembranous candidosis*

njih. Obično se javlja kao prvi pokazatelj HIV infekcije. Kod pacijenata koji su HIV pozitivni, ova kandidoza može biti indikator progresije bolesti.¹⁰ Kod pacijenata u kasnom stadijumu oboljenja, pseudomembranozna kandidoza može biti iskoplikovana kserostomijom.¹¹

Eritematozna kandidoza predstavlja crvene, ravne, tanke lezije na dorzalnoj površini jezika ili tvrdom i mekom nepcu (Sl.2). Javlja se sa simptomima, pacijenti se žale na oralno pečenje, najčešće za vreme konzumiranja slane i začinjene hrane. Eritematozna kandidoza je obično rana manifestacija imune disfunkcije.¹² Dijagnoza se zasniva na kliničkoj slici, kao i na pacijentovoj medicinskoj istoriji i virusološkom statusu. Ova forma kandidoze leči se topikalnim antifungicidima.

Angularni heilit nije dijagnostički simptom HIV infekcije. Angularni heilit se karakteriše crvenilom i fisurama u uglovima usana (Sl.3). Može se javiti samostalno ili u sklopu sa eritematoznom i pseudomembranoznom kandidozom.¹³ Ukoliko se ne leči, može trajati duži vremenski period. Terapija uključuje upotrebu lokalnih antifungicidnih masti koje se direktno aplikuju na zahvaćena mesta, četiri puta dnevno u toku dve nedelje.

Lokalna terapija za umerene forme eritematozne i pseudomembranozne kandidoze ogleda se u upotrebi oralnih rastvora nistatina i dražeja nistatina.¹⁴ Teže forme ovih oboljenja leče se sistemskom upotrebotom flukonazola i ketokonazola. Terapija traje najmanje dve nedelje da bi se uništile stvorene gljivične kolonije do nivoa koji neće izazvati recidiv.¹⁵



*Sl.2. Eritematozna kandidoza
Fig 2. Erythematous candidosis*

wiped away, typically leaving a red and bleeding underlying surface. Pseudomembranous candidosis is often the first indicator of HIV-infection. In patients known to be HIV positive, this candidosis may be an indicator of disease progression.¹⁰ In late stage patients, thrush may be complicated by xerostomia (dry mouth).¹¹

Erythematous candidosis presents as a red, flat, subtle lesion on the dorsal surface of the tongue or on the hard or soft palates (Fig.2). The condition tends to be symptomatic, with patients complaining of oral burning, most frequently while eating salty or spicy foods. Erythematous candidosis is usually an early manifestation of immune dysfunction.¹² Clinical diagnosis is based on appearance, as well as on the patient's medical history and virologic



*Sl.3. Angularni heilit
Fig 3. Angular cheilitis*

Bakterijske infekcije

Gingivitis i parodontopatija se mogu javiti kod HIV pozitivnih pacijenata bez obzira na njihovo zdravstveno stanje, međutim postoje neka parodontalna stanja koja su jedinstvena za HIV infekciju. Kod ovakve populacije pacijenata postoje tri forme parodontalnog oboljenja: linearni gingivalni eritem – LGE (predhodni HIV-gingivitis), ulcero-nekrozni gingivitis – UNG i ulcero-nekrozna parodontopatija – UNP.¹⁶ Granica između ulcero-nekroznog gingivitisa i ulcero-nekrozne parodontopatije napravljena je da bi se definisala razlika između brze destrukcije mekih (UNG) i tvrdih tkiva (UNP).¹⁷

Stanje gingive od ranije poznato kao **HIV-gingivitis**, a sada poznato kao **linearni gingivalni eritem** predstavlja crveni prsten oko krunice zuba duž marginalne gingive i može biti praćen krvarenjem i nelagodnošću (Sl.4). Može se javiti i na slobodnoj i na pripojnoj gingivi u vidu petehijalnih tačaka.¹⁸



Sl.4. Linearni gingivalni eritem-(HIV gingivitis)

Fig. 4. Linear gingival erythema

Terapija uključuje kompletan debridment od strane parodontologa, ispiranje usne duplje rastvorom hlorheksidin-glukonata dva puta dnevno u toku dve nedelje i dobru oralnu higijenu kod kuće.¹⁹

Još uvek nije potvrđeno da li su UNG i UNP različiti ili isti entiteti, pa ih iz tih razloga Američko društvo parodontologa svrstava u „**nekrozna parodontalna oboljenja**“. Zbog veoma malih razlika u mikrobnom sastavu ova dva stanja i sličnim terapijskim tretmanima, diskusija će biti fokusirana na ulcero-nekroznu parodontopatiju, koja je inače znak teške imunosupresije.²⁰ Ovo stanje se karakteriše jakim bolom, spontanim gingivalnim krvarenjem, ul-

status. This form of candidosis is managed with topical antifungal therapies

Angular cheilitis, of itself is not diagnostic of HIV infection Angular cheilitis presents as erythema or fissuring of the corners of the mouth (Fig.3). It can occur with or without erythematous or pseudomembranous candidosis.¹³ It can persist for an extensive period of time if left untreated. Treatment involves the use of a topical antifungal cream applied directly to the affected areas four times a day for the two week treatment period.

Topical treatments for mild to moderate cases of both erythematous and pseudomembranous candidosis include nystatin oral suspension, and nystatin pastilles.¹⁴ Systemic agents for moderate to severe disease consist of fluconazole and ketoconazole. Treatment must be continued for at least two weeks in order to reduce organism colony-forming units to levels low enough to prevent recurrence.¹⁵

Bacterial infection

Gingivitis and periodontitis can occur no matter what the patient's HIV status is, however there are some periodontal conditions that are unique to HIV infection. The three presentations of periodontal disease have been reported in this patient population: linear gingival erythema-LGE (former HIV-gingivitis), necrotizing ulcerative gingivitis - NUG and necrotizing ulcerative periodontitis – NUP.¹⁶ The demarcation between necrotizing gingivitis and necrotizing periodontitis was created to define the difference between the rapid destruction of soft (NUG) and hard (NUP) tissues.¹⁷

The gingival condition originally known as **HIV-gingivitis**, and now called **linear gingival erythema (LGE)**, presents as a red band along the gingival margin and may or may not be accompanied by occasional bleeding and discomfort (Fig.4). It can also present on attached and non-attached gingiva as petechial-like patches.¹⁸ Treatment includes debridement by a dental professional, twice-daily rinses with a chlorhexidine gluconate suspension for two weeks, and improved home oral hygiene.¹⁹

It has not been determined whether or not NUG and NUP are the same or unique entities and both have been classified as “**Necrotizing Periodontal Diseases**” by the American Academy of Periodontology. Due to the lack of significant differences in the microbial profile

cerisanim gingivalnim papilama, zadahom, gubitkom zuba, i brzom destrukcijom gingivalnog tkiva i alveolarne kosti²¹(Sl.5). Pacijenti bol opisuju kao „duboki bol u vilici“.



Sl.5. Ulcero-nekrozna parodontopatija
Fig. 5. Necrotizing ulcerative periodontitis

Terapija se sastoji u uklanjanju dentalnog plaka, kamenca i nekrotičnih mekih tkiva. Pacijentima se može dati i antibiotička terapija (metronidazol 400mg 3 puta dnevno u toku 7-10 dana).

Virusne infekcije

Mnoge od virusnih infekcija koje se mogu javiti u usnoj duplji kod pacijenata sa HIV infekcijom, razvijaju se u ranom stadijumu oboljenja. Ukoliko se ne leče, mogu perzistirati sve vreme trajanja bolesti. Herpes virus izaziva najveći broj infekcija kod HIV pozitivnih pacijenata sa Herpes simplex virusom (HSV) kao glavnim uzročnikom infekcija. Prisutne su i infekcije izazvane Epšten-Bar virusom (EBV) i humanim papiloma virusom (HPV).

Oralni herpes simpleks je virusna infekcija izazvana herpes simpleks virusom tip 1 (HSV-1).²² Karakteriše se vezikulama koje su ispunjene seroznim sadržajem, na licu, usnama ili u ustima (Sl.6). U usnoj duplji HSV infekcija zahvata keratinizovana tkiva kao što su tvrdi nepci i gingivalno tkivo. Infekcija počinje prodromalnim simptomima – povišenom temperaturom, groznicom i opštim znacima prehlade. Može se javiti i svrab i trnjenje. Pucanjem vezikula nastaju male bolne ulceracije koje mogu da konfluiraju.²³ Ulceracije na usnama su lako prepoznatljive. Herpetične ulceracije obično same prolaze, mada se mogu koristiti i virostatici kao što je aciklovir.

of these two conditions and similarity in treatment, this discussion will focus on NUP, which is a marker of severe immune suppression.²⁰ The condition is characterized by severe pain, spontaneous gingival bleeding, ulcerated gingival papillae, fetid odor, loosening of teeth, and rapid destruction of soft tissue and the alveolar bone.²¹(Fig.5). Patients often refer to the pain as “deep jaw pain.” Treatment includes removal of dental plaque, calculus, and necrotic soft tissues. Patients are then placed on antibiotic therapy (metronidazole 400 mg three– four times a day for seven– ten days).

Viral infection

Many of the viral infections found in the oral cavity of HIV infected individuals develop early in the illness and, if left untreated, can persist for the duration of the illness. Herpes virus causes most of the viral infections in these patients with the main culprits being herpes simplex (HSV). There is Epstein-Barr (EBV) viral infection and human papilloma virus (HPV), too.

Oral Herpes simplex is a viral infection associated with herpes simplex virus type 1 (HSV-1).²² It is characterized by the eruption of serum-filled vesicles, or blisters on the face, lips, or mouth (Fig.6). Inside the oral cavity HSV is usually confined to keratinized tissues such as the hard palate and gingival tissue. This infection often starts with prodromal (early) symptoms of malaise, fever, and a general feeling of illness. There also may be itching or tingling sensations. Outbreaks start as a small crop of vesicles that rupture to produce small, painful ulcerations that may coalesce.²³ Lesions on the lip are fairly easy to recognize. Herpetic ulcerations are often self-limiting, although the use of an antiviral medication such as acyclovir.



Sl.6. Herpes simpleks
Fig. 6. Oral Herpes simplex

Vlasasta leukoplakija, koju izaziva Epšten-Bar virus, opisuje bele naborane lezije na bočnim ivicama jezika²⁴, lezije se ne mogu mehanički ukloniti (Sl.7). U eri jake antiretrovirusne terapije znatno je smanjena incidencija pojave vlasaste leukoplakije. Stanje je inače asimptomatsko i ne zahteva nikakvu terapiju, osim ako postoje estetski razlozi.

Humani papiloma virus, virus koji je udružen sa pojavom genitalnih i drugih bradavica, je jedan od najčešćih seksualno prenosivih infekcija. Često javljanje HPV infekcija zapaženo je kod imunokompromitovanih individua kao što su pacijenti sa karcinomom, pacijenti sa transplantiranim organima, pacijenti na imunosupresivnoj terapiji i HIV pozitivni pacijenti.²⁵ Bradavice mogu biti karfiolastog oblika, klinaste ili uzdignute sa ravnom površinom (Sl.8). Najčešća lokalizacija oralnih bradavica kod HIV pozitivnih pacijenata je labijalna i bukalna sluzokoža.²⁶ Oralne bradavice kod HIV pozitivnih pacijenata, naročito one lezije sa različitom kliničkom slikom, su često otporne na klasičnu terapiju i razvijaju veliku otpornost bez obzira na agresivni tretman.²⁷ Lezije mogu recidivirati nakon terapije.

Terapijski tretmani uključuju hirurško uklanjanje, elektrokauterizaciju, lasersku ablaciju i krioterapiju.



Sl.7. Vlasasta leukoplakija
Fig. 7. Oral hairy leukoplakia

Oportunistički tumori

Postoji nekoliko oportunističkih tumora koji se mogu javiti u usnoj duplji kod pacijenata, a koji su povezani sa HIV infekcijom. Dve

Oral hairy leukoplakia, which is caused by Epstein-Barr virus, presents as a white, corrugated lesion on the lateral borders of the tongue; the lesion cannot be wiped away²⁴ (Fig.7). There has been a marked decrease in the incidence of oral hairy leukoplakia in the potent antiretroviral era. This condition is normally asymptomatic and does not require therapy unless there are cosmetic concerns.

Human papilloma virus (HPV), the virus associated with genital and other warts, is one of the most common sexually transmitted infections. Increased rates of HPV infection have been documented in immunocompromised individuals such as cancer patients, organ transplant recipients, patients receiving immunosuppressive drugs and HIV-infected patients.²⁵ The warts may be cauliflower-like, spiked, or raised with a flat surface (Fig.8). The most common location for oral warts in HIV-infected patients is the labial and buccal mucosa.²⁶ Oral warts in HIV-infected individuals, particularly those lesions with a multifocal clinical presentation, are often resistant to traditional therapies and exhibit a high recurrence rate despite aggressive treatment.²⁷ Lesions tend to recur after treatment.

Therapeutic treatments include surgical excision, electrocautery, laser ablation and cryotherapy.



Sl.8. Humani papiloma virus
Fig. 8. Human papilloma virus

Opportunistic tumors

There are several opportunistic tumors that can occur in the mouth which are associated with a patient being HIV-positive. The two

najčešće neoplazme, koje se javljaju, su KAPOŠI sarkom i Non-Hočkin-ov limfom.

Kapoši sarkom je najčešće maligno stanje koje se javlja sa HIV infekcijom, mada je incidencija javljanja jako smanjena zbog jakih antiretroviralnih tretmana. KAPOŠI sarkom može biti u vidu makula, nodusa, uzdignuća i ulceracija, sa bojom koja ide od crvene do purpurne. Rane lezije su ravne, asimptomatske i crvene boje, koja postaje tamnija tokom trajanja same promene. Lokalizacija promena je moguća bilo gde u usnoj duplji. Progresija lezija može uticati na normalnu funkciju usne duplje. Lezije mogu postati simptomatske, kao posledica traume ili infekcije. Biopsija je potrebna radi postavljanja dijagnoze.^{28,29}

Terapija obuhvata lokalno davanje hemoterapeutika, krioterapiju i hirurško uklanjanje. Oralna higijena mora biti naglašena. Sistemski hemoterapiji može biti terapija izbora kod pacijenata sa ekstra i intraoralnim KAPOŠIjevim sarkomom.³⁰

Kada se nađe u usnoj duplji, **Non-Hočkin-ov limfom** je najčešće mekana, egzofitična, tumorska masa koja se brzo uvećava. Za postavljanje dijagnoze potrebna je biopsija, a terapija se sastoji iz zračne i hemoterapije.^{31,32}

Druge oralne lezije koje su povezane sa HIV infekcijom

Kserostomija (suva usta) je faktor koji doprinosi pojavi dentalnih kvarova i parodontalnih problema kod HIV pozitivnih pacijenata. Promene u kvalitetu i kvantitetu pljuvačke, uključujući i antimikrobrovo svojstvo, dovode do brzog napredovanja dentalnih kvarova i parodontalnog oboljenja (Sl.9).

Ovakvo stanje se može javiti zbog promena na pljuvačnim žlezdam ili korišćenja lekova u terapijske svrhe kod pacijenata sa HIV infekcijom.³³ Postoje lekovi za koje se zna da izazivaju suvoću usne duplje i to su antidepresivi, antihipertenzivi i antihistaminici. Neka oralna stanja (npr. kandidoza) je teško lečiti ukoliko ne postoji dovoljan protok pljuvačke. Pacijenti mogu žvakati žvakaće gume bez šećera ili sisati bombone bez šećera da bi stimulisali produkciju pljuvačke. Mogu se propisati i preparati fluora radi prevencije karijesa koji se može javiti kao posledica smanjenog protoka pljuvačke.

Aftozne ulceracije se javljaju na mestima koja ne keratiniziraju, kao što je labijalna i bukalna

most frequently occurring neoplasms are KAPOŠI's sarcoma and Non-Hodgkin's lymphoma.

Kaposi's sarcoma is still the most frequent HIV-associated oral malignancy, although its incidence has dramatically decreased in the potent antiretroviral therapy era. Kaposi's sarcoma can be macular, nodular, or raised and ulcerated, with color ranging from red to purple. Early lesions tend to be flat, red, and asymptomatic, with the color becoming darker as the lesion ages. Location is possible anywhere in the oral cavity. Progressing lesions can interfere with the normal functions of the oral cavity. The lesions become symptomatic secondary to trauma or infection. Definitive diagnosis requires biopsy.^{28,29}

Treatment ranges from localized injections of chemotherapeutic agents, cryotherapy and surgical removal. Oral hygiene must be stressed. Systemic chemotherapy may be the treatment of choice for patients with extraoral and intraoral Kaposi's sarcoma.³⁰

Non-Hodgkin's lymphoma when seen in the oral cavity is most often an exophytic soft, tumorlike mass that can enlarge rapidly. Biopsy is required for diagnosis and treatment consists of radiation and/or chemotherapy.^{31,32}

Other Oral Lesions associated with HIV infection

Xerostomia (dry mouth) is a major contributing factor in dental decay and periodontal problems in HIV-infected individuals. Changes in the quantity and quality of saliva, including diminished antimicrobial properties, lead to rapidly advancing dental decay and periodontal disease (Fig.9).

This condition may be due to salivary gland involvement or medications used therapeutically in people with HIV.³³ Several types of medication are known to cause dry mouth including antidepressives, antihypertensives, and antihistamines. Some oral conditions (ex. Candidosis) becomes more difficult to treat without adequate salivary flow.³⁴ Patients can chew sugarless gum and suck on sugarless candies to stimulate saliva production. Fluorides should be prescribed to patients to prevent cavities that occur as a result of decreased salivary flow.

Aphthous ulcerations appear on non-keratinized places, such as the labial or buccal mucosa, floor of the mouth, and ventral surface of



*Sl.9. Kserostomija
Fig. 9. Xerostomia-dry mouth*



*Sl.10. Aftozne ulceracije
Fig. 10. Aphthous ulcerations*

sluzokoža, pod usne duplje i ventralna površina jezika (Sl.10). Uzrok nastanka je nepoznat. Ležije se karakterišu prisustvom haloa na inflamiranoj sluzokoži i prekrivene su žuto-sivim pseudomembranama.³⁵ Veoma su bolne, naročito tokom uzimanja slane, začinjene i kisele hrane i napitaka, ili prilikom uzimanja tvrde hrane. Aftozne ulceracije zarastaju bez terapije kod osoba sa zdravim imunim sistemom. Kod osoba sa narušenim imunim sistemom, ležije mogu postati bolnije, veće i osetljivije na sekundarne infekcije.³⁶ Kod imunokompromitovanih pacijenata, ležije traju duže od 14 dana.³⁷

Terapija blagih formi ogleda se u lokalnoj upotrebi kortikosteroida, kao što je rastvor deksametazona, koji se tri puta dnevno mučka u ustima u toku 2-3 minuta a onda ispljune, za sve vreme trajanja simptoma. Kod težih i većih promena koriste se sistemske kortikosteroidi – prednizon.³⁸

Zaključak

Oralne ležije su značajne pojave kod HIV i AIDS infekcija, i veoma često su i prvi fizički znak bolesti. Obaveza kliničara je da prepozna i identifikuju promene koje se javljaju u sklopu HIV infekcije. Prisustvo ili odsustvo određenih promena često mogu biti predskazatelji krajnje progresije bolesti kod HIV pozitivnih pacijenata. Veoma je važno napomenuti da samo oralne promene ne mogu biti korišćene za dijagnozu HIV oboljenja, ali mogu uputiti i podstaknuti kliničara ka daljem testiranju pacijenata.

the tongue (Fig.10). Their cause is unknown. The lesions are characterized by a halo of inflammatory mucosa and a yellow-gray pseudomembranous covering.³⁵ They are very painful, especially during consumption of salty, spicy, or acidic foods and beverages, or hard foods. Aphthous ulcers are left to heal on their own in people with competent immune systems. However, untreated lesions may become painful, quite large, and prone to secondary infection in those with immune dysfunction.³⁶ In immunocompromised patients, these lesions tend to persist for longer than the 14-day period.³⁷

Treatment for milder cases involves the use of topical corticosteroids such as dexamethasone elixir swished for two-three minutes and then expectorated, three times daily until symptoms resolve. For more severe occurrences, systemic corticosteroids such as prednisone are used.³⁸

Conclusion

Oral lesions are significant features of HIV and AIDS infections and, in fact, are often the first physical manifestation of the disease. As clinicians, it is our responsibility to recognize and identify those lesions associated with HIV infection. The presence or absence of certain lesions can often act as predictors to the overall progression of the disease in a diagnosed patient. However, it is important to note that the presence of oral lesions alone should not be used to diagnose HIV but should prompt the clinician to encourage further testing.

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