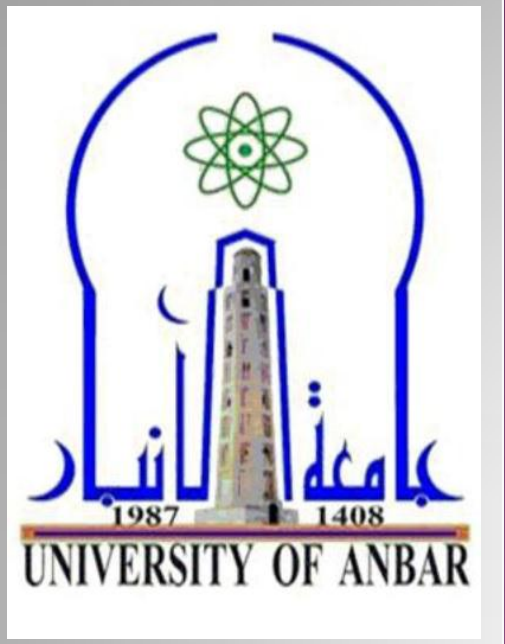

ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

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- AIDS infection is a disease caused by Human Immunodeficiency Virus. The first cases of AIDS reported in the United States were documented by the Centers for Disease Central and Prevention (CDC) in the 1981 Los Angeles, California.

- In infected individuals, the virus can be found in most bodily fluids. HIV has been recovered from serum, blood, saliva, semen, tears, urine, breast milk, ear secretions, and vaginal secretions.
- The most frequent routes of transmission are sexual contact, parenteral exposure to blood, or transmission from mother to fetus during the perinatal period.

- Infection also has been documented to be caused by breast-feeding from infected mothers, organ transplantation, intravenous (IV) drug abusers, hemophiliac patients receiving blood products, or heterosexual contacts with one of the other high-risk groups.

- The primary target cell of HIV is the CD4+ helper T lymphocyte. The DNA of HIV is incorporated into the DNA of the lymphocyte and is present for the life of the cell. In most viral infections, host antibodies that are protective against the organism usually are formed. In people with HIV infection, antibodies are developed but are not protective.

- The virus may remain silent, cause cell death, or disrupts their normal function. A subsequent decrease in T-helper cell numbers occurs, with a resultant loss in immune function. The normal response to viruses, fungi, and encapsulated bacteria is diminished.

- HIV infection initially may be asymptomatic, or an acute response may be seen.
- The acute viral syndrome develops within 1 to 6 weeks after exposure (e.g., generalized lymphadenopathy,sore throat, fever, maculopapular rash, headache, myalgia, arthralgia, diarrhea, photophobia, peripheral neuropathies). Oral changes may include mucosal erythema and focal ulcerations.

- In some patients (before development of overt AIDS),there is a period of chronic fever, weight loss, diarrhea, oral candidiasis, herpes zoster, and/or oral hairy leukoplakia (OHL). This has been termed AIDS-related complex (ARC).

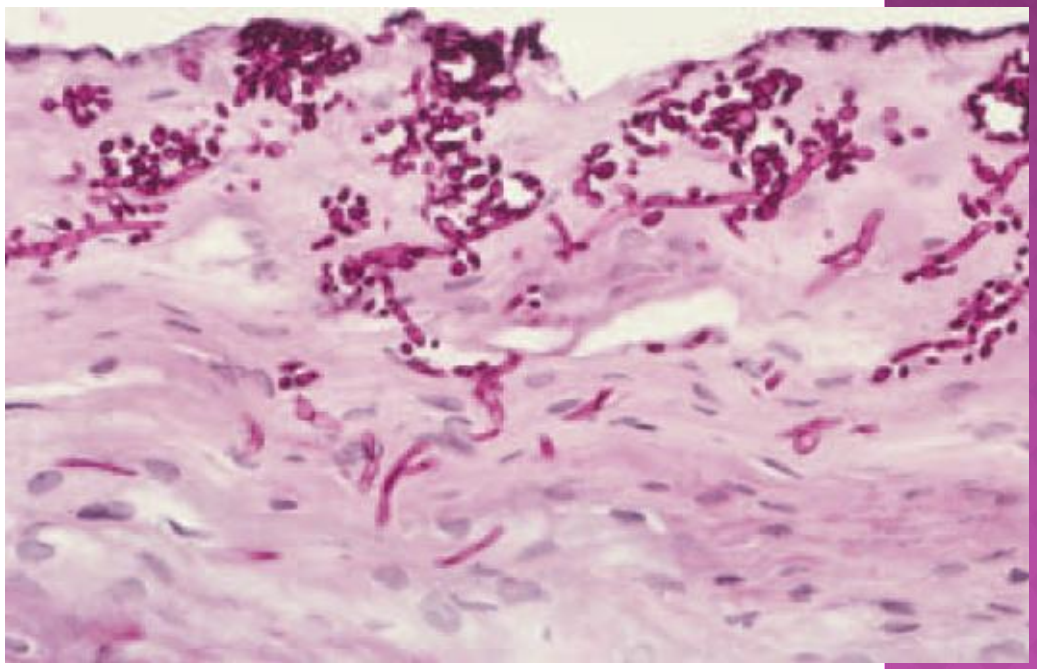
- The spectrum of HIV infections is extremely broad.
- Patients are categorized on the basis of clinical conditions associated with HIV infection and CD4 + T-lymphocyte counts.
- The oral manifestations are mainly a result of cellular immunodeficiency induced by HIV infection and may be divided into four major groups: infections, neoplasms, neurologic disturbances, and lesions of unknown cause.

- These oral lesions may represent early or later manifestations of the disease although their prevalence as well as the diagnostic and/or prognostic value need further evaluation

ORAL AND MAXILLOFACIAL LESIONS STRONGLY ASSOCIATED WITH HIV INFECTION

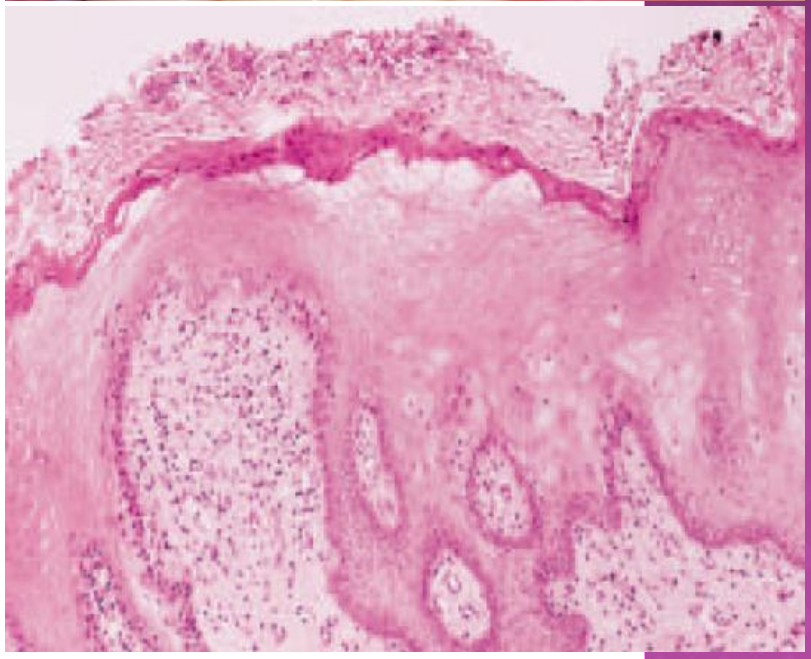
ORAL CANDIDIASIS

- It is the most common intraoral manifestation of HIV infection
- The following four clinical patterns are seen: 1. Pseudomembranous candidiasis
  2. Erythematous candidiasis
  3. Hyperplastic candidiasis
  4. Angular cheilitis



ORAL HAIRY LEUKOPLAKIA

- EBV-related lesion in patients with AIDS
- It presents as a white mucosal plaque that does not rub off on the lateral border of the tongue or on the buccal mucosa, soft palate, pharynx and esophagus may be involved.
- Histopathology: it appears as hyperkeratosis and epithelial hyperplasia.

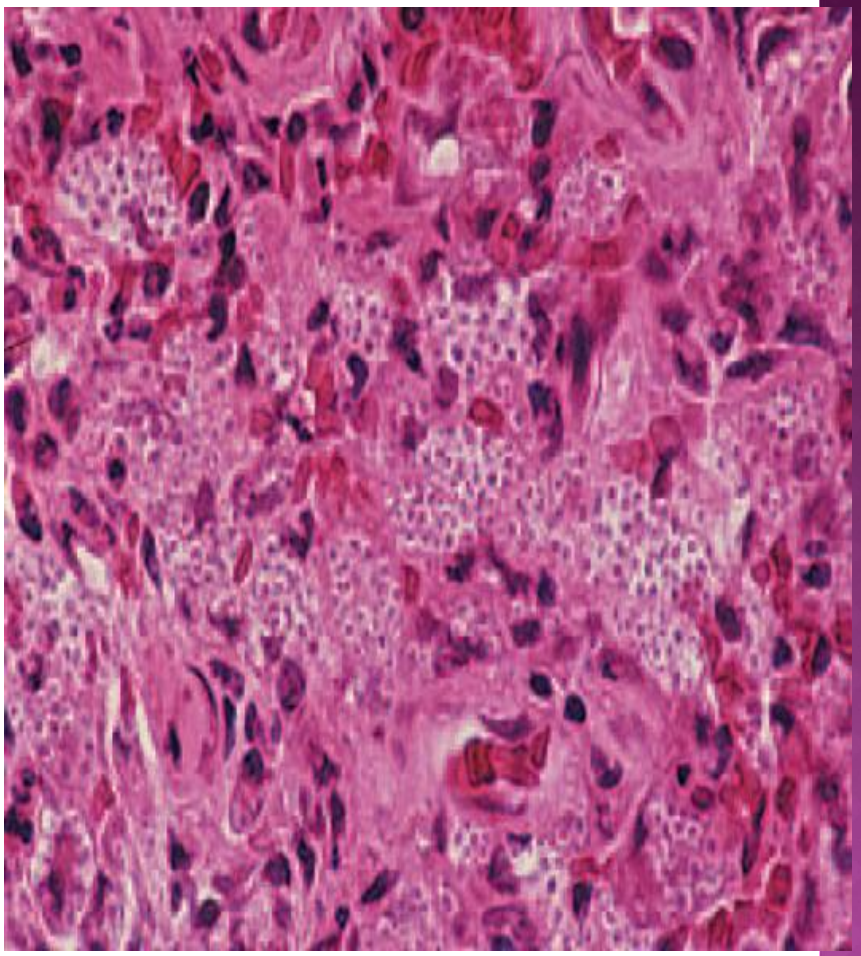


OTHER INFECTIONS

- MYCOBACTERIAL INFECTION: TB in HIV patient difficult to diagnose and more resistance to drug regimens.
- Recurrent HSV infections occur in HIV-infected patients as more widespread, occur in an atypical pattern, and may persist for months.
- Recurrent varicella-zoster virus (VZV) is common in HIV-infected patients, but the course is more severe, with increased morbidity and mortality rates.

Human papillomavirus (HPV) increased prevalence in HIV-infected patients with unusual variants such as HPV-7 and HPV-32

- Deep fungal infection histoplasmosis is noted in about 5% of AIDS patients with disseminated disease fever, weight loss,
- splenomegaly, and pulmonary infiltrates.



KAPOSI'S SARCOMA

- KS is a multifocal neoplasm of vascular endothelial cell origin manifests as multiple lesions of the skin or oral mucosa.
- The trunk, arms, head, and neck are the most commonly involved anatomic sites. The hard palate,gingiva, and tongue are most affected site. When present on the palate or gingiva, the neoplasm can invade bone and create tooth mobility.

The lesions begin as brown or reddish purple macular lesions that do not blanch with pressure. With time, the macules typically develop into plaques or nodules. Pain, bleeding, and necrosis may become a problem and necessitate therapy

- Oral lesions are frequently a cause of major morbidity, as a result of pain, bleeding, and functional interferences. Problematic lesions may be removed surgically or with cryotherapy.
- Laser ablation or electrosurgery have been used to treat KS, although theoretical concerns have been raised with respect to aerosolization of viral particles, which may place the surgical team at risk.

PERSISTENT GENERALIZED LYMPHADENOPATHY

- The most frequently involved sites are the posterior and anterior cervical, submandibular, occipital, and axillary nodes. Nodal enlargement fluctuates, usually is larger than 1 cm, and varies from 0.5- 5.0 cm

- Because lymphoma is known to occur in this population, a lymph node biopsy may be requested for patient reassurance. Histopathologic examination reveals florid follicular hyperplasia.

NON-HODGKIN'S LYMPHOMA

- NHL is the second most common malignancy in HIV-infected individuals.
- The majority of the NHLs are B-cell lymphomas and large number of these neoplasms demonstrate a relationship with both EBV and HHV-8.

- Oral lesions are seen in about 4% of patients with AIDS-related NHL and most frequently involve the gingiva, palate, tongue, tonsil, or maxillary sinus. Intraosseous involvement lead to progressive periodontitis with loss of periodontal attachment and loosening of teeth. In these cases, widening of the periodontal ligament and loss of lamina dura frequently are noted and represent clues to the diagnosis.

- The treatment usually is combination chemotherapy, and radiation is reserved for local control of the disease.
- These malignancies are aggressive, and survival usually is measured in months from the date of discovery.

HIV-ASSOCIATED PERIODONTAL DISEASE

- Three atypical patterns of periodontal disease are associated strongly with HIV infection:
- 1. Linear gingival erythema
- 2. Necrotizing ulcerative gingivitis
- 3. Necrotizing ulcerative periodontitis

- In addition to these three atypical forms of HIV-related periodontal disease, patients also may demonstrate conventional gingivitis, chronic periodontitis, and progressive nonnecrotizing periodontitis.

HYPERPIGMENTATION

- Skin, nails, and oral mucosa. Microscopically show increased melanin pigmentation in the basal cell layer of the affected epithelium.
- Several medications taken by AIDS patients may cause the increased melanin pigmentation.

OTHER CONDITIONS HIV- RELATED

- HIV-associated salivary gland disease
- Diffuse infiltrative lymphocytosis syndrome
- Thrombocytopenia
- aphthous ulcerations
- Squamous cell carcinoma

DIAGNOSIS

- Confirmation of HIV infection can be made by viral culture or by detection of HIV antibodies or antigens.
- Polymerase chain reaction (PCR) for detection of HIV DNA is used to identify someone who was infected recently or HIV carriers who otherwise have negative antigen or antibody findings.

TREATMENT

- Although no cure exists, the current therapeutic approaches with antiretroviral medications increasing survival rate
- It is expensive, associated with significant adverse reactions, may not be effective in all patients, or may fail after a period of initial success. However, the best defense against the
- disease is prevention of the initial infection.

SUGGESTIVE READING

Brad W Neville, Douglas D Damm, Carl M. Allen, Jerry E Bonguot. Oral And Maxillofacial Pathology, 4th Edition, Elsevier, 2015


Thank
You!