

# AIDS-Associated Lesion Hairy Leukoplakia

By: Manaaer Gamal Mehdawi

2<sup>nd</sup> year Dentistry student, Faculty of Basic Medical Science

Libyan International Medical University



## Oral hairy leukoplakia (OHL)

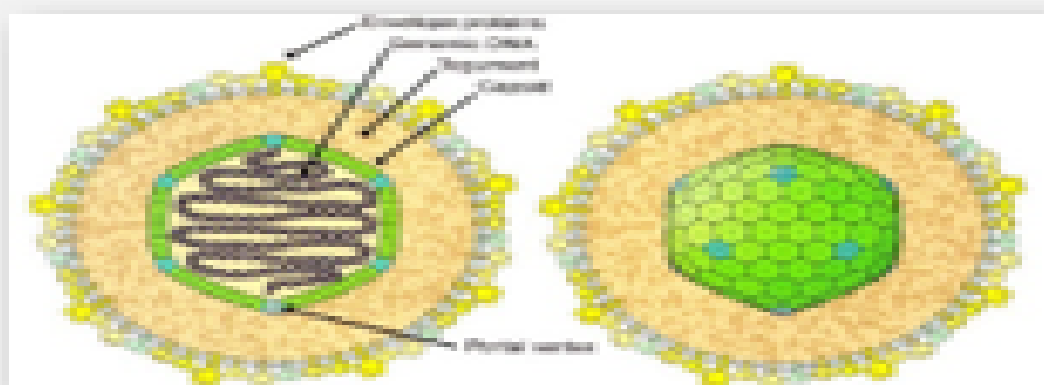
Oral hairy leukoplakia (OHL) is a disease of the mucosa first described in 1984. This pathology is associated with Epstein-Barr virus (EBV) and occurs mostly in people with HIV infection, both immunocompromised and immunocompetent, and can affect patients who are HIV negative. (1)



(1)

## Epstein-Barr virus (EBV)

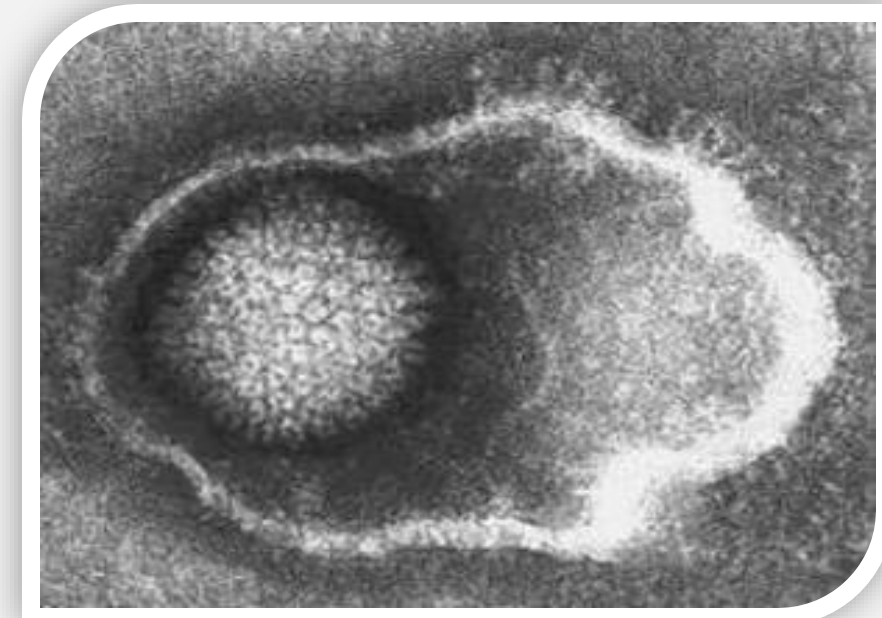
Epstein-Barr virus (EBV), also known as human herpesvirus 4, is a member of the herpes virus family. It is one of the most common human viruses. EBV is found all over the world. It consists of a double-stranded DNA genome, enclosed within an icosahedral capsid, surrounded by a phospholipid rich envelop (2)



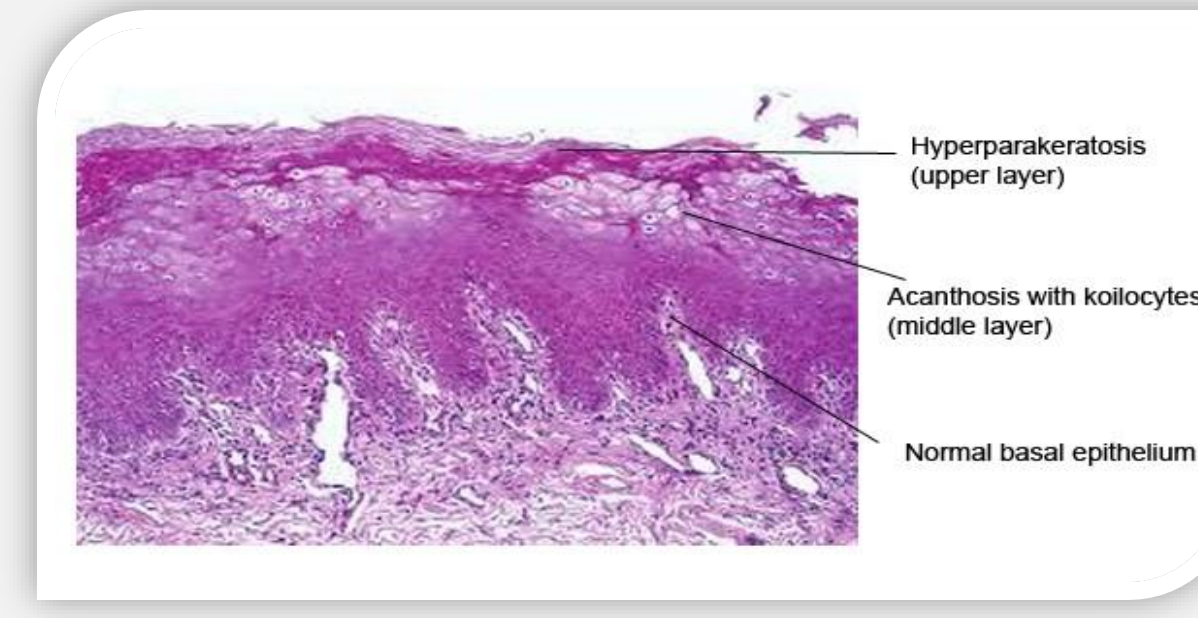
(2)

## Pathology

EBV initially infects basal epithelial cells where it enters a replicative state leading to the release of infectious virus into the saliva throughout the life of the infected person, so the hairy leukoplakia shows hyperkeratosis or parakeratosis, or both, with a ridged or shaggy surface or, rarely hair-like extensions of keratin. More important is the presence of koilocyte-like cells, which are vacuolated and ballooned prickle cells with shrunken, dark nuclei surrounded by a clear halo. So there will be a thickening of the epithelium and a thick superficial layer of parakeratin, below there will be a pale staining layer of koilocyte-like cells. There is no inflammatory reaction.(4)



(2)



(2)

## Oral Manifestation

This classically appears as an asymptomatic, greyish-white to white, corrugated or folded lesion on the tongue, either unilaterally or bilaterally, they can also be thick, hard, non-painful patches.

Their hair-like growths are formed by the folds in the patches

Permanent, you can't remove the patches with a toothbrush or with another oral care tool

Sometimes, the patches cause discomfort and taste changes.(3)



(1)

## Differential Diagnosis

The differential diagnosis of OHL includes idiopathic leukoplakia, frictional hyperkeratosis, and leukoplakia associated with tobacco use. Other entities that might be considered are lichen planus, lupus erythematosus, and hyperplastic candidiasis.(4)

## Conclusion

Dental checkups allow detecting any potential problems that may not even be aware of it. So, a dentist can be the first one to diagnose a life threatening disease. Oral health is a crucial aspect of maintaining general health. Oral tissues may reflect immune deficiency status. Nearly all HIV-infected individuals develop oral lesions at some time during their illness. HIV patients are a part of the community, and avoid treating them is not ethical and will increase the problem.

## References

- 1- Khammissa RA, Fourie J, et al. Epstein-Barr Virus and Its Association with OHL: A Short Review. *Int J Dent*. 2016.
- 2- Sachithanandham J, Kannangai R, et al. Significance of Epstein-Barr virus and CMV infection among subtype-C human immunodeficiency virus-infected individuals. *Indian J Med Microbiol*. 2014
- 3- Samaranayake, Lakshman P. Essential microbiology for dentistry. 14th edition 2012.
- 4- Cawson's Essentials of Oral Pathology And Oral Medicine 7th edition 2002.



# AIDS-Associated Lesion Hairy Leukoplakia

By: Manaaer Gamal Mehdawi

2nd Year Dentistry Student, Faculty of Basic Medical Science

Libyan International Medical University



## Oral hairy leukoplakia (OHL)

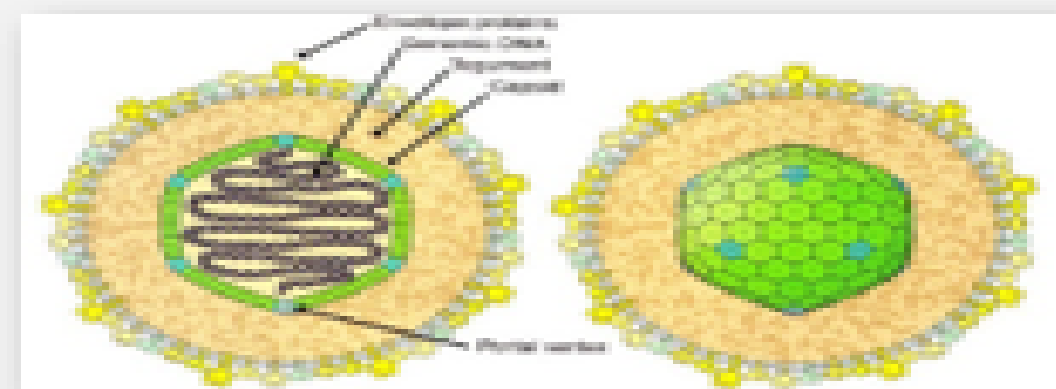
Oral hairy leukoplakia (OHL) is a disease of the mucosa first described in 1984. This pathology is associated with Epstein-Barr virus (EBV) and occurs mostly in people with HIV infection, both immunocompromised and immunocompetent, and can affect patients who are HIV negative. (1)



(1)

## Epstein-Barr virus (EBV)

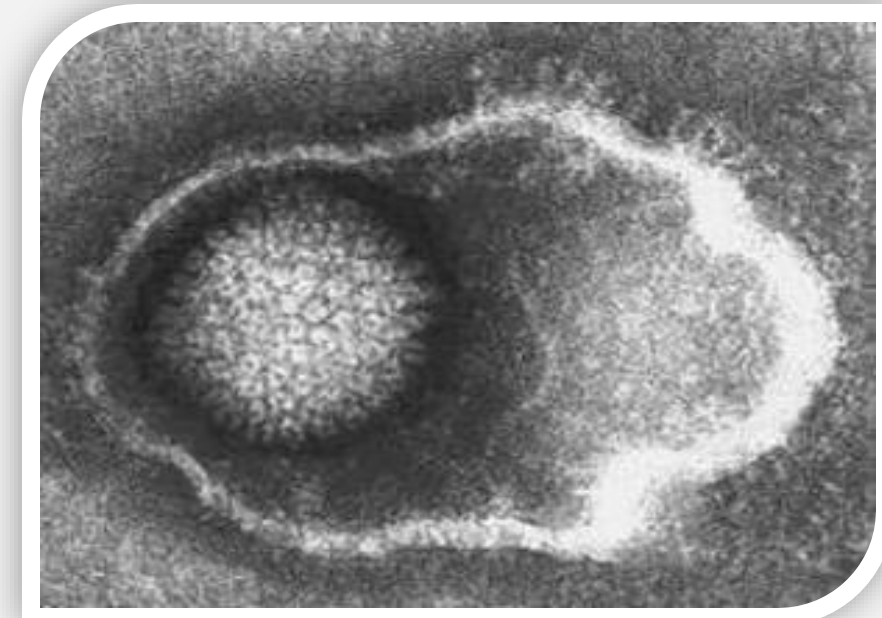
Epstein-Barr virus (EBV), also known as human herpesvirus 4, is a member of the herpes virus family. It is one of the most common human viruses. EBV is found all over the world. It consists of a double-stranded DNA genome, enclosed within an icosahedral capsid, surrounded by a phospholipid rich envelop (2)



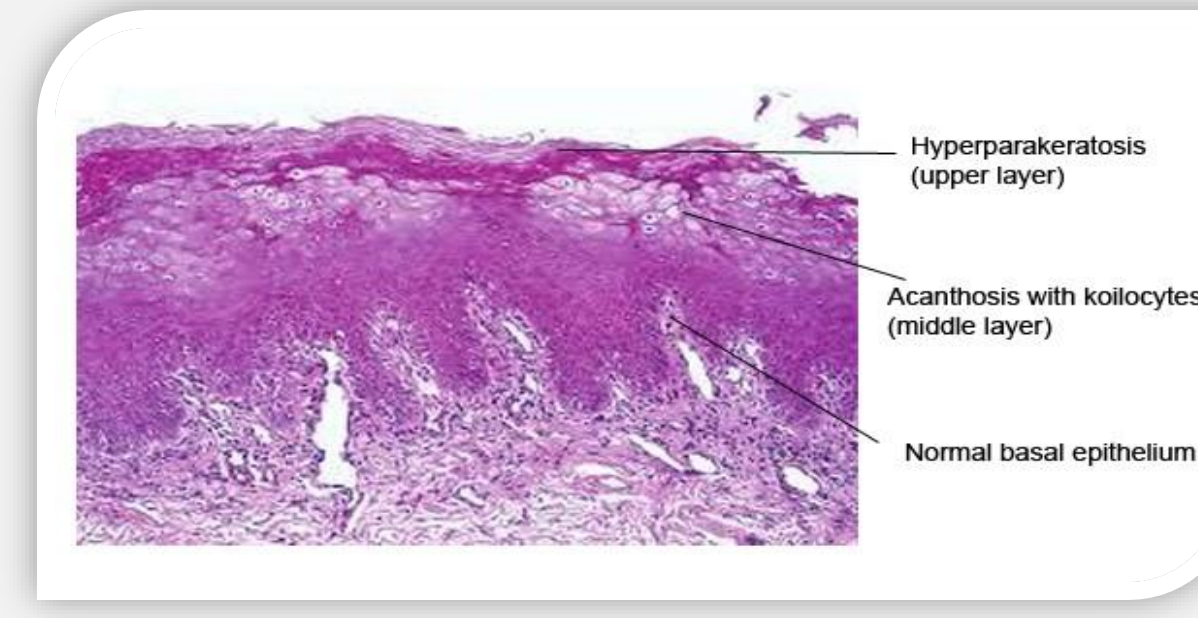
(2)

## Pathology

EBV initially infects basal epithelial cells where it enters a replicative state leading to the release of infectious virus into the saliva throughout the life of the infected person, so the hairy leukoplakia shows hyperkeratosis or parakeratosis, or both, with a ridged or shaggy surface or, rarely hair-like extensions of keratin. More important is the presence of koilocyte-like cells, which are vacuolated and ballooned prickle cells with shrunken, dark nuclei surrounded by a clear halo. So there will be a thickening of the epithelium and a thick superficial layer of parakeratin, below there will be a pale staining layer of koilocyte-like cells. There is no inflammatory reaction.(4)



(2)



(2)

## Oral Manifestation

This classically appears as an asymptomatic, greyish-white to white, corrugated or folded lesion on the tongue, either unilaterally or bilaterally, they can also be thick, hard, non-painful patches.

Their hair-like growths are formed by the folds in the patches

Permanent, you can't remove the patches with a toothbrush or with another oral care tool

Sometimes, the patches cause discomfort and taste changes.(3)



(1)

## Differential Diagnosis

The differential diagnosis of OHL includes idiopathic leukoplakia, frictional hyperkeratosis, and leukoplakia associated with tobacco use. Other entities that might be considered are lichen planus, lupus erythematosus, and hyperplastic candidiasis.(4)

## Conclusion

Dental checkups allow detecting any potential problems that may not even be aware of it. So, a dentist can be the first one to diagnose a life threatening disease. Oral health is a crucial aspect of maintaining general health. Oral tissues may reflect immune deficiency status. Nearly all HIV-infected individuals develop oral lesions at some time during their illness. HIV patients are a part of the community, and avoid treating them is not ethical and will increase the problem.

## References

- 1- Khammissa RA, Fourie J, et al. Epstein-Barr Virus and Its Association with OHL: A Short Review. *Int J Dent*. 2016.
- 2- Sachithanandham J, Kannangai R, et al. Significance of Epstein-Barr virus and CMV infection among subtype-C human immunodeficiency virus-infected individuals. *Indian J Med Microbiol*. 2014
- 3- Samaranyake, Lakshman P. Essential microbiology for dentistry. 14th ed. The McGraw-Hill Companies, 2016
- 4- Cawson's Essentials of Oral Pathology And Oral Medicine 7th ed 2002.