RECURRENT HERPES LABIALIS (Review of the Literature and A Case Report)

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SUMMARY

Herpes Simplex virus is the factor of herpetic stomatitis and reccurent herpes labialis, Especially, It occur in patients whose recurrent intra-oral infection immunity system was dominated by any reasons. Information was given about herpes labialis due to fact a case by reviewing the literature.

Recurrent Herpes Labialis

Nearly 80- 90 % of the world population is infected with herpes virus. Virus is a problem making modern life hard in all races cultures and countries (It is not important what kind of virus is)

Herpes simplex virus (HSV) is a DNA virus and at the same time, it is a member of human herpes virus family (HHV) 1-6

Scientific researhes have shown that herpes virus has got more than 5000 different types and only eight of these can cause ilness in human . 1-7.36 These

- 1. Herpes Simplex Virus 1; (HSV1) Cold Sores
 - 2. Herpes Simplex Virus 2; (HSV2)
 - 3. Varicella Zoster Virus; (VZV/HHV3)
 - 4. Ebstein Barr Virus; (EBV / HHV4)
 - 5. Cytomegalo Virus; (CMV / HHV5)

- 6. Human Herpes Virus; (HHV6)
- 7. Human Herpes Virus; (HHV7)
- 8. Human herpes Virus; (KSHV/HHV8)

HSV has got two types. ¹⁻³⁶ Type 1 Cause lesion commonly on skin in oro-facial region and in upper part of the body. It is known as Herpes Labialis, because it is located commonly in corner of the mouth, on the lip, in the mucocutaneous joint place and under the nose. ^{7,8,10,12} Type 2 cause infection in genital region, in the bottom part of the body and in infants. ^{7,8,10,13,27}

Behaviour form, environmental and epidemiological features of both viruses are more similar to each other. It was determined that nearly 15-37 % of all new HSV-2 cases were resulted from HSV.1¹⁷

HSV infection in infected human always remains in the way of the three periods.1-7,9,26

- Primer Infection Period
- Latent Period
- Reactivitation and Recurrent Infection Period

Primer Infection Period

Although premier infection occurs in two-three years old, It shows that Virus has very high infections character because new cases appaer in other old-group. However, The rate of

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premier infection is about 15 % in adults. Disease infects with direct contact. After 15-42 days from begining of premier herpes infection, It has been observed that Virus remains actively in body liguids. In children. There are a lack of appetite, weakness and joint-pains. Temperature and trembling occurs together with classic viral symptoms. After a very short time, (6-24 hours) mouth eruptions affecting lip, tongue, gingiva and oral mucosa happen. 1,5,7,9,21,23

Prodromal Period

1-There seems to be restless feeling and itching and seratching in the site of lesion soon before the lesion appear. 1.2.5.7

2-Inflammation Period : swollen surrounded by a slightly erythema area commences 12 hours after predromal priod. 1.7,25

3-Vesicul Period: One or more vasicular lesions 2-4 mm diametered, surrounded by a small erythema area, in a blistered construction appear 24-36 hours after following inflammation. The first observation site of vasicullars is under lower lip sides, skin, margin of mucosa and the nose. The lesions settle in oral cavity and, in turn, gingiva, oral mucosa, tongue and pharynx. Viral titre in this period, that is 48 hours throught. Infection is the highest level, and decreases in the time. Both vasicular liquid and patient's saliva is to large extend infected. Particularly, as a result of flow of infected saliva in children, herpetic skin lesions can be seen on the chin and anterior part of the chest. The patients states that They feel uncomfort for the first 24 hours following to vasicular formation. 1,5,7,9,12

4-Ulcer Period: Vasicullar in mucosa do not remain constant for along time. In 36 and 48 hours, They are torn and the liguid in them is evacuated. Painful ulcers take their places. There

are scab on lesion in skin. In acute herpes gingivo-stomatitis the swelling affecting marginal and papiller gingiva distributes the patient in along extent. Typically, a white strata forms on the tongue. Cervical lymphadenopathy is generally available. There is a restless and uncomfort accompanied by fewer.

\$-Recover Period: Lesions recovers completely without leaving skatris in 7-10 days^{1,5,7,11}

Latent Period

After the previous infection, immunization occurs in some induvidualis. However, Virus may pass to the latent period in 16-45 % of the patients'.

In this cases, Virus remains latent in specific cell groups. This cell group is generally nerve cells in trigeminal gonglion. Virus enters from the nerve ends, It hides in the body cycling the gonolions. It hides without giving any hazard to the host by escaping from immune system. It can turn into a virus in a cell in which a virus remained latent. In viral genoms in which latent virus settled, viral genoms formed into closed molecules, and they appear only as subgroups of virus genes. 5.7.8.10.11

Reactivation and Recurrent Infection Period

Recurrance of lesions and reactivation of the virus hasn't been verified completely with recurrent, It may be together with a number of factor. Among these, emotional and physical stresses take the great place. For spontaneous activation of the viruses, It is necessary to remove the pressure either on immune system or latent viral genes. This is possible with having celluler and hormonal and neuroendocrin ways taken action by means of trigering factor. 5.8,18,20

CASE

The patient, Z Z, is married and a mother with two children. He applied for Atatürk University Dentistry faculty the depertment of Oral-Diagnose and Radiolog Clinic with the complaint of tootache. In her examination, a hard and round, brown shelled and 5 mm-diametered, and rough lesion was observed in left side of lower lip. In oral examination, gingiva, soft tissue and tongue were normal appearence, and there was no lesion appeared once a month or every two months in the on set of mensturation period, and It first become vasiculler type, Then It was torn and it become shelled. Healed in 7-10 days and that it was not "vesicles" She indicated that there were no similar lesions in any part of her body and in her family members. Our patient who informed that She had no other systemic disease said that she had never used and will never use any medicine for "vesicles"

DISCUSSION

Recurrent may vary. There is literature that certain factor such as ultraviolet light, systemic infections, physical trauma, emotional stress, fever, tooth extraction and menstruation triggered the recurrency. 1,8,11,20,23,25

In the reactivation of HSV infection, clinical lesions are usually observed on the mucocutaneous parts of the lips. However, intra-oral recurrent has also been reported. The frequency of recurrency vary among patients. Yet, It has been indicated that involvement occurs once every month or more in 25 % of the patients affected by recurrent herpes labialis. 5.7

Herpes labialis, in our case, repeating every month or every two months at the beginning of menstruation period is in conformity with the above mentioned findings.

Besides, It was indicated that recurrency increases as a result of cancer chemotherapy, HIV infection, aplasia of the bone marrow as a result of leukemia and after the restraint of the immunity system due to the administration of some medicine after transplantation. The oral lesion appearance of the secondery herpes simplex infection in these patients is variable and very dramatic. Vesicula and bullea lead to wide ulcerative sites. Healing occurs more lately,5.15,23,27,31,32,36,37

Primary HSV 1 infection, subclinic or acute may cause to some diseases. These are gingivostomatitis, rhinitis, vulvovaginitis, keratoconjunctivitis, meningoencephalitis, eczema herpeticum and whitlow 2,5,7,9,12,22,24

No trombocytopenia was observed. However, Minor trombocytopathy was considered responsible for the formation of purpura in some cases.⁹

It was thought that herpes virus, among some malignity etiologies may play a role according to various studies done. Amonge these HSV 1 was related to oral cancer (squamous-cell tumors), HSV 2 to cervical cancer, Epstein-Barr Virus to Burkitt's lymphoma and nasopharyngeal carcinoma, and cytomegalovirus to Kaposi's sarcoma 15,16,32,33,35,38

Moreover, there are papers about the relation of HSV I with erythema multiforme, cranial nerve palsies, cluster headaches, behoet's Syndrome, recurrent apthae and duodeunal ulser. 7,28,30,34

REFERENCES

- Neville WN, Damm DD, Allen CM, Bouquot JE.
 Oral Maxillofacial Pathology W.B.Saunders Com.
 Toronto 1995.
- Cawson RA, Odel EW, Porter S. Oral Pathology and Oral Medicine. 7 ed. Edinburg London New York Philadelphia St.Louis Sydney Toronto, 2002.
- 3. Zegarelli EV, Kutscher AH, Hyman AG, Diagnosis of Disease of the Mouth and Jaws, sec ed, Lea ñ Febiger, Philadelphia, 1978.
- Stafne EC. Oral Roentgenographic Diagnosis.
 Third Ed.W.B. Saunders Com. Toronto, 1969.
- 5. Sonis ST, Fazio RC, Fang L. Oral Medicine. 2nd.ed.W.B Saunders Com. Philadelphia,1995.
- Shafer WG, Hine MK, Levy BM. Oral Pathology.
 Fourth ed. W.B Saunders Com. Philadelphia, 1983.
- 7. Scully B. Orofacial herpes simplex virus infections: Current concepts in the epidemiology, pathogenesis, and treatment, and disorders in which the virus may be implicated. Oral Surg. Oral Med. Oral Path 1989; 68: 701-10.
- 8. Straus SE, Rooney JF, Sever JL, Seidlin M, Nusmoff-Lehrman S, Cremer K. Herpes simplex virus infections: Biology, Treatment and Prevention. Ann.Intern Med.1985;103:404-19.
- 9. Scully C. Ulscrative stomatitis, gingivitis and skin lesions. Oral Surg. 1985;59(3):261-3,
- 10. Whitley RJ, Nahmias AJ, Visintine AM, Fleming CL, Alford CA, The natural history of herpes simplex virus infection of mother and newborn. Pediatrics.1980;66(4):489-94.
- II. Croen KD, Ostrove LM, Dragovic LJ, Smialek JE, Straus SE. Latent herpes simplex virus in human trigeminal ganglia. N Engl J Med. 1987;317:1427-32.
- 12. Rowe NH, Heine CS, Kowalski CJ. Herpetic whitlow: An occupational disease of practicing dentist. JADA.1982;105:471-3

- 13. Corey L, Adams HG, Brown ZA, Holmes KK. Genital herpes simplex virus infections: clinical manifestions, course and complications. Ann Intern Med 1983;98:958-72.
- 14. Greenberg MS, Cohen SG, Boosz B, Friedman H. Oral herpes simplex infections in patients with leukemia. JADA 1987;114:483-6.
- 15. Shillitoe EJ, Silverman S. Oral cancer and herpes simplex virus: A review. Oral Surg 1979;48 (3):216-24.
- 16. Scully C. Viruses and cancer: Herpesviruses and tumors in the head and neck. Oral Surg. 1983;56(3):285-92.
- 17-Kohl S. Herpes simplex virus immunology: Problems, progres and promises. J Infec Dis 1985;152 (3):435-40.
- 18. Corey L, Spear PG. Infections with herpes simplex viruses. N Engl J Med 1986; 314(11):686-91.
- 19. Turner R, Shehab Z, Osborne K, Hendley JO. Shedding and survival of herpes simplex virus from" Fever Blister". Pediatrics 1982;70(4):547-9.
- 20. Openshaw H, Bennett HE. Recurrence of herpes simplex virus—after dental extraction. J İnfec Dis 1982: 146(5):707.
- 21. Spruance SL. Pathogenesis of herpes simplex labialis: excretion of virus in the oral cavity. J Clin Microbiol 1984;19:675-9.
- 22. Manzella JP, McConvilleJH, ValentiW, Menegus MA, Swierkosz EM, Arens M. An outbreak of herpes simplex virus 1 gingivostomatitis in a dental hygiene practice. JAMA 1984;252:2019-22.
- 23. Silverman S, Beumer J. Primer herpetic gingivostomatitis of adult onset. Oral Surg. Oral Med Oral Path 1973;36:496-503.
- 24. Scully C. Ulcerative stomatitis, gingivitis, and rash: A diagnostic dilemma. Oral Surg Oral Med. Oral Path 1985;59:261-3.
- 25. Corey L., Spear PG. Infections with herpes simplex viruses. N Engl J Med 1986;314:686-91.

- 26. Nahmias AJ, Roizman B. Infection with herpes simplex viruses 1 and 2. N Engl. J Med 1973;289:667-74.
- 27. Malkin JE. Natural history of HSV 1 and HSV 2 transmission models and epidemology consequences of HSV infection on HIV infection. Prevention Ann Dermatol Venereol 2002;129:571-6.
- 28. McCormick DP, Herpes simplex virus as a cause of Bell's palsy. Lancet 1972;1:937-9.
- 29. Stalker W. Facial neuralgia associated with recurrent herpes simplex. Oral Surg Oral Med. Oral Path 1980;49:502-3.
- Borg I, Andren L. Herpes simplex virus as a cause of peptic ulcer. Scand J Gastroenterol 1980;15:53-61.
- 31. Barrett AP. A long-term prospective clinical study of orofacial herpes simplex virus infections in acut leukemia. Oral Surg Oral Med. Oral Path 1986;61:149-52.
- 32. Cohen SG, Greenberg MS. Chronic herpes simplex virus infection in immunocompromised patients. Oral Surg. Oral Med. Oral Path 1985;59:465-71.
- 33. Montgomery MT, Redding SW, Le Maistre CF. The incidence of oral herpes simplex virus infection in patient undergoing cancer chemotherapy. Oral Surg Oral Med Oral Path 1986;61:238-42.
- 34. Grufferman S, Barto JW, Eby NL. Increased sex concordance of sibling pairs with Behcet's disease, Hodgkin's disease, multiple sclerosis and sarcoidosis. Am J Epideiol 1987;126:365-70.
- 35. Maitland NJ, Scully C, Prime SS, Ward-Booth P. Oral cancer: are herpes simplex genes expressed? J Dent Res 1984;63:518.
- 36. Glesby MJ, Moore RD. Chaisson RE. Clinical spectrum of herpes zoster in adults infected with human immunodeficiency virus. Clin Infect Dis 1995;21:370-75.
- 37. Regezi JA, Eversole R, Barker BF, et all. Herpes simplex and cytomegalovirus coinfected ulser in HIV pozitive patients. Oral Surg. Oral Med Oral Path 1996;81:55-62.

38. Epstin JB, Sherlok CH, Wolber RA. Oral manifestions of cytomegalovirus infection. Oral Surg Oral Med. Oral Path 1993;75:443-51.

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