GINGIVA IN FEVER BLISTERS IN 5 YEAR OLD: CASE REPORT

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ABSTRACT
Acute (primary) herpetic gingivostomatitis typically affects children, but this infection also occurs in adults. Because of the limited symptoms, a dentist may be the first health care practitioner consulted. It is therefore important that dentists be able to recognize the condition. The causative agent for AHGS has been identified as herpes simplex virus (HSV). The virus exists in 2 forms, HSV-1 (or HHV-1) and HSV-2 (or HHV-2). Most oral, facial and ocular infections result from HSV-1, whereas HSV-2 accounts for most genital and cutaneous lower body herpetic lesions. This paper presents a case report of the primary infection in a five year old with emphasis on clinical features and management.

KEYWORDS: Fever Blister, Herpes, acute herpetic gingivo-stomatitis, HSV.

INTRODUCTION
A primary herpes simplex infection is also called as acute herpetic gingivo-stomatitis. It occurs in patients with no prior infection with HSV-1 (Herpes Simplex Virus). HSV reaches nerve ganglion supplying the affected area, presumably along nerve pathways and remains latent until reactivated. It occurs during close personal contact. Primary infection of newborn is believed to be caused by vaginal secretions during birth. Dentist may suffer primary lesion of fingers from contact with lesions of the mouth or saliva of patients who are asymptomatic carriers of HSV. Incidence varies according to socio-economic status. Preschool period is more prone due to frequent exchange of salivary and nasal secretions. Prodromal symptoms followed by vesicle development and ulcerations are the main clinical features.[1,2,3]

CASE REPORT
A patient named Gungun 5 Years female came to our department with chief complaint of ulcerations in mouth since 1 week. Patient’s father reported that she suffered from high grade fever 2 weeks back for which they took some medicines from a local doctor. After 1 week of fever she developed small ulcers in mouth which increased in number and size with time. Patient felt difficulty in speech and eating. Patient’s nature was bit irritated since 1 week. Father also reported that since 3 days patient was taking Ibugesic syrup 5ml two times a day.

Patient was lean and weak to the extent that her father needs to carry her and brought her to the department. She was anxious and unco-operative too. Extra-oral examination revealed upper and lower swollen lips with reduced mouth opening. Lips were incompetent with submandibular and cervical lymphadenopathy. Intra-oral examination revealed ulceration of oral cavity including comissural area bilaterally, buccal mucosa bilaterally, tongue and gingival (Figure-1,2). The base of ulcer is covered with grayish white or yellow slough. The margins of sloughed lesions are uneven and are accentuated by bright red rimmed, well demarcated, inflammatory halos. The individual ulcers vary in size from 6-8 mm on buccal mucosa, 2-4 mm on tongue and 1-2mm on gingiva. Entire gingiva is edematous and swollen with small ulcers. Appearance of generalised marginal acute gingivitis is appreciated. Corners of mouth were hemorrhagic and matted with fibrin like exudate and parting of lips was noticed during cry; which was extremely painful. Compiling the history given by patient and clinical features noticed, a provisional diagnosis given was Primary Herpes Simplex Infection or Acute Herpetic Gingivo-Stomatitis.

The differential diagnosis for the case can be Hand –foot and mouth disease, Herpangina (oropharyngeal and soft
palate involvement. Recurrent aphthous ulcers (no general systemic symptoms and lesions are less numerous and more often found in adults), Erythema multiforme (occurs in young adults, gingivitis is not severe and generally limited to anterior part of mouth. Skin lesions are also present), Bullous lichen planus (it is a painful condition characterised by large blisters on tongue and cheek which rupture and it undergoes ulceration), ANUG (is a necrotizing condition, seen rarely in children and consists of punched out gingival margins, pseudo membrane that peels off leaving raw areas, marginal gingiva is affected with no definite duration) and drug allergy (caused by drugs like barbiturates, gold bromide, penicillin, streptomycin etc).

Laboratory tests are rarely required in these cases. The diagnosis is straightforward. Patients especially adults, may have less typical clinical features, making the diagnosis difficult and require lab. Investigations. So the final diagnosis in this case given was Acute herpetic gingivo-stomatitis.

The treatment plan advised to patient was Advised to continue the same drug, she was already taking. Mucopain gel to apply locally on affected area thrice a day, electrolyte supplements and to maintain oral hygiene. The lesions were seen completely healed on 5 day follow up (Figure-4, 5).

DISCUSSION

All herpes simplex viruses contain DNA nucleus which can remain latent in host neural cells, thereby evading host immune response. HHV-6 is a newly discovered virus and can infect T-4 cells and is a possible factor in HIV infection. It is the most common viral disease affecting men. Epidemiology varies for type I AND II as HSV-I—infections above the waist and HSV-II— infections below the waist. Both can be transmitted sexually, occur in childhood and preschool children are more prone. It is also known by other names like Acute herpetic gingivo-stomatitis, Herpes labialis, Fever blister, Cold sore and Infectious stomatitis.[1,2,3]

The common modes of transmission are close personal contact, vaginal secretions during birth, herpetic whitlow and socioeconomic group. The typical clinical features if this infection are- Incubation period is usually 5-7 days

FIGURES AND LEGENDS

Figure-1, 2-shows lesions with ulceration and yellow exudates on gingival, lips and commissures.

Figure-3, 4 -Shows healed lesions on gingiva, lips and commissures.
and it develops in both children and young adults. Prodromal symptoms precede local lesion by 1–2 days which include fever, headache, malaise, nausea, vomiting. 1–2 days after prodromal symptoms, small vesicles appear on the oral mucosa; these are thin walled vesicles surrounded by an inflammatory base. The vesicles quickly rupture, leaving shallow round discrete ulcers. The lesion occur on all portions of mucosa. As the disease progresses, several lesions may coalesce, forming larger irregular lesions. Generalised acute marginal gingivitis is an important diagnostic criteria. Several small gingival ulcers are also present. Posterior pharynx reveals inflammation. Submandibular and cervical lymph nodes are tender and enlarged. It is a self-limiting disease and fever disappears in 3–4 days; lesions heal in a week-10 days time. The laboratory diagnosis includes cytology, HSV isolation and antibody titres which is confirmatory test. 

Symptomatic treatment for controlling this infection includes topical anesthetics like lignocaine, dyclonine hydrochloride 0.5 % are used. Topical anti-infective agents to prevent secondary infection are 0.2 % chlorhexidine gluconate, tetracycline mouthwash are used. Fluid to maintain proper hydration and electrolyte balance are given and also maintenance of oral hygiene is crucial. Whereas the specific treatment includes Acyclovir (1.000-1600 mg daily, for 7-10 days) which inhibits DNA replication in HSV infected cells reducing the duration of illness. Acetaminophen (10-15 mg/kg every 4 hours) or ibuprofen (10 mg/kg every 6 hours) can be given to children at home for mild to moderate pain.

Recurrent herpes simplex virus infection occurs in patients who have experienced a previous herpes simplex infection and who have serum –antibody protection against another primary exogenous infection. It is not a re-infection but a reactivation of virus that remains latent in nerve tissue. Common most precipitating factors are surgery involving trigeminal ganglion, trauma to lips, fever, emotional upset, sunburns, fatigue, pregnancy and low immunity. Clinical features can be discussed in two forms first as Recurrent herpes labialis and secondely as Recurrent intra-oral herpes infection. It occur at widely varying intervals. Prodromal symptoms include, lesion preceded by tingling and burning sensation. It is accompanied by edema at the site of lesion and formation of clusters of small vesicles. They are 1-3mm to 1-2cm in size. These gray or white vesicles rupture quickly leaving small red ulcerations. Healing occurs in 7-10 days and leave no scars. Management includes minimize obvious trigger and wearing of sunblock. Use oral acyclovir with topical use of carbon oxolone. Maintain electrolyte balance with maintenance of good oral hygiene.

CONCLUSION

Oral infections caused by herpes simplex type 1 are widespread, even among otherwise healthy people. While most of these herpetic infections are asymptomatic, young children are at risk for developing extensive oropharyngeal vesicular eruptions when first infected with the virus. The herpes virus is ubiquitous, passing from person to person through contaminated secretions or lesions. Providing supportive care and educating parents about transmission of the virus are important aspects of nursing care because educating parents or caregivers about transmission is equally vital, whether children are cared for at home or in the hospital.

REFERENCES