APHTHAE AND ORAL APHTHOSIS
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ABSTRACT

Aphtha (aphthous stomatitis) is an ulceration of mucous membranes of an unknown etiology. Initially, it shows as an erythematous eruption, the lesions being localized at the level of the oral cavity has a high incidence in populations; - it is caused by the intake of certain foods or irritating, toxic substances, avitaminosis, fatigue, infectious or viral diseases. Oral aphthae are small ulcerations of the oral mucosa localized on the jugal, lingual, labial, or gingival mucosa; it causes discomfort, from slight soreness to pain during mastication and intake of certain foods. Ulcerations tend to be recurrent if they are not treated properly and on time. The source of an oral aphtha is infectious, and the condition usually appears when the organism is in depletion, and the defense system is weak. Aphthous stomatitis may generally appear due to an exacerbation of the regular flora, favored by plaque, irritations caused by the consumption of alcohol, chemical substances, spices, smoking or a poor oral hygiene. Oral aphthae, also called aphthous ulcerations or aphthous stomatitis, are small lesions that develop in the soft tissues in the oral cavity or at the base of the gums. These small ulcerations, lesions or oral aphthae are usually very painful, and attention should be paid to the correction of digestive disorders, the avoidance of acid foods, spices, citrus, milk, or dairy products. Material and method: The study was conducted in the period from 2017 – 2019 and comprises a number of 434 cases, out of which 236 women (54.37%) and 198 men (45.63%) who are diagnosed with oral aphthae, small, isolated, multiple ulcerations, preceded by an erythematous area. Results and Discussion: Oral aphthae are due to a bacterium or virus, although the allergy to a particular type of bacterium found in the oral cavity can trigger them. These can be an allergic reaction to certain foods. Conclusions: Studies show that oral aphthae can be determined by a deficient immune system that uses its own antibodies to destroy the cells of the oral mucosa.

Keywords: oral aphthosis, aphthous stomatitis, ulcerations, erythematous rash.

INTRODUCTION

Aphthae are an elementary lesion of the mucous membranes, initially showing as an erythematous area that appears as a painful ulceration. They appear in the aphthous fever, under the form of eruptions localized on the oral mucosa. Aphthae can be isolated or integrated in a more general disease, aphthous stomatitis [1,2,3].

Aphthae are small, sometimes isolated, often multiple ulcerations that can be either deep or superficial and can appear anywhere on the surface of the oral cavity; they are the most frequently met types of oral ulcers. They are very painful to touch, accompanied by hyper-salivation, cause discomfort in mastication, deglutition, without regional adenopathy.

Women are affected more often than men. Aphthae usually occur between the ages of 10 and 40 years, and have a recurrent character. The period of remission between the occurrence of aphthae can be of days, weeks, months or years [4, 5, 6].

The cause is unknown (probably viruses, immunological disorders), it is supposed to be multifactorial. It may be an allergic reaction to certain foods. The
Aphthae can be determined by a deficient immune system that uses its own antibodies to destroy the cells of the oral mucosa\cite{7,8}. The lack of certain vitamins and micro-elements can cause the appearance of aphthae. Other possible causes for oral aphthae include autoimmune diseases \cite{9, 10, 11, 12}.

Due to sensitive nerve endings, it creates discomfort when eating, drinking or talking. The pain is so severe that disturbs one’s sleep. They are located on the mucosa of the lips, cheeks, palatine veil, tongue or tonsils, usually having small dimensions (from a few millimetres to 1 cm) and they are round in shape.

Aphthous stomatitis (mouth aphthae) represents the repeated occurrence of mouth ulcers in people who have no other conditions. It is believed that this condition is an immediate immune response of T cells, which is triggered by a multitude of factors. The ulcers (aphthae) recur periodically and heal completely, although in more severe cases new ulcers may occur in other parts of the mouth before the previous ones heal. Aphthous stomatitis is one of the most common disorders of the oral mucosa and is believed to affect, to some extent, the general population. Symptoms range from a small coloured spot up to having an impact on chewing, swallowing and speaking, and severe forms can lead to weight loss. There is no cure for aphthous stomatitis, and the therapy is aimed at reducing pain, inflammation and at helping to cure ulcers, but there is little evidence of the effectiveness of any treatment that has been used \cite{13, 14, 15}.

Aphthae are small lesions or white vesicles, surrounded by a red area. They are not contagious, but are often mistaken for cold sores caused by herpes virus infection, which is contagious; the aphthae appear inside the oral cavity, and cold sores generally appear outside of it. The aphthae are recurrent and may be minor (of small size), major (larger) or herpetiform (multiple).

The irritations caused to the oral mucosa and the oral lesions are inflammation, blemishes or ulcerations of the oral mucosa, lips or tongue. There are many types of ulcerations and oral disorders, of which the most common are aphthae, cold sores, leukoplakia and candidiasis; ulcerations, irritations of the oral mucosa, and oral lesions can be painful, non-aesthetic, and can affect eating and speech. Any ulceration that persists for more than one week should be examined by the dentist. In order to determine the cause, a biopsy (tissue sampling for analysis) can be performed, in order to exclude serious diseases, cancer or HIV infection \cite{16, 17, 18, 19}.

Cold sores/herpes labialis, also called herpes fever or herpes simplex, appear in the form of grouped, painful, fluid-filled vesicles, around the lips and sometimes under the nose or around the chin. Cold sores are generally produced by a type of herpes virus and are highly contagious. Primo-infection occurs frequently in children, sometimes without symptoms, and can be mistaken for a cold or flu. Once the person is infected, the virus stays in the body and causes recurrent, occasional attacks. However, there are people in whom the virus remains inactive.

Leukoplakia has the appearance of a whitish patch of hard consistency on the inside of the cheek, on the gums or tongue. It is often associated with smoking and with chewing tobacco, other causes including inappropriate prostheses, fractured teeth or cheek biting. 5% of cases of leukoplakia develop into cancer, so a biopsy is necessary.

Candidiasis - the aphthae- is an infection with Candida albicans (a yeast). It has the appearance of an eruption of small white-yellowish or reddish pustules that ooze on the surface of the oral mucosa. The tissue beneath the pustules is sometimes painful; it occurs frequently in
people with dental prostheses, newborn, people weakened by disease and in those with immunodeficiency. People with dry mouth or those who are taking or have just completed antibiotic treatment are also susceptible [1].

In case of aphthae, several factors are incriminated: hereditary or psychomatic and can be favoured by dyspepsia, menstrual disorders, hyperthyroidism, but also by deposits of tartar on the teeth, by the use of a new brush that injures the tissue, by the consumption of chocolate, of some unwashed exotic fruits, of tobacco or coffee [20-37].

The diagnosis is usually based on the examination of the oral cavity. The doctor may require certain tests, such as blood tests, bacteriological examination or ulcerations biopsy.

The diagnosis for oral aphthae is predominantly clinical. Patients describe a prodromal stage with a burning sensation at the place of the aphthae 1-2 days before. Patients with recurrent aphthae cite precipitating factors such as local trauma or hypersensitivity. It is important to know the age at which the first aphthae started, as they start after puberty.

Recurrent oral aphthae fall into three categories: minor aphthous ulcers → most of them; they cause minimal symptoms; they are round or oval of 2-4 mm in diameter; they have a base that is initially yellow and is coloured in grey as it epithelize and heals; they are surrounded by an erythematous halo and edema; they are found especially in the non-keratinized mobile areas of oral mucosa, lips, cheeks, floor of the mouth, ventral face of the tongue, these are rare in the keratinized areas of the palate or dorsal tongue; they appear in groups of 1-6 ulcers; they heal in 1-7 days and reappear at an interval of 1-4 months → they do not leave any scar.

Major aphthous ulcers; (Sutton ulcers, recurrent necrotic mucous periodontitis) include: they are larger and last longer, of more frequent recurrence and more painful; they are round or oval, but larger in size and associated with marginal edema; they reach 1 cm in diameter; they can be found only in areas of the oral mucosa, including the dorsal or palatal area; occur in groups of 1-6 ulcers simultaneously, they are hard to heal in 10-40 days; recurrence is very frequent, can be cured without scarring; they are associated with increased VSH or plasma viscosity.

Herpetiform ulcers can be found in older age groups, especially in women; they start with blisters that rapidly pass into punctate, multiple, discrete ulcers; they involve the oral, keratinized and non-keratinized mucosa; grow in size and become coalescent causing large round ulcers; they heal in 10 days or more, they are very painful, they occur so frequently that the ulceration is practically continuous.

The ulceration begins as a small, red, sensitive swelling that gives the sensation of burning for a day. The aphthae are covered with a yellow or white membrane, being bordered by a red halo.

It heals in two weeks without scarring.

There are no therapies to prevent the onset or recurrence. The treatment may consist of rinses with weak antiseptic solutions, touching of the blisters with silver nitrate solution and trichloroacetic acid, as well as antibiotic applications. The aphthae generally heal in 7-10 days, but relapses are very common. Temporary improvement can be achieved with help of topical ointments and painkillers. The irritation can be reduced by using an antimicrobial mouthwash. Sometimes antibiotics are prescribed to prevent secondary infections.

Spicy, excessively cold or hot foods, which may cause further irritation shall be avoided. Also, local irritating factors such as irritating dental work,
unfinished fillings or sharp edges in the oral cavity will be removed.

Topical substances or oral washes with chlorhexidine can be applied in order to relieve pain and help the ulcers to heal faster. Steroid pastes can relieve pain and inflammation. Chlorhexidine gluconate mouthwash reduces severity and pain.

Studies have shown the effectiveness of corticosteroid and antimicrobial topical agents.

Another therapy is the biopsy of the lesions, the lesion changes from an immune-mediated one into a traumatic one, which is considered less painful and heals faster than the typical aphthae.

**MATERIAL AND METHOD**

The study carried out during the period 2017-2019 includes a number of cases, 434 cases out of which 236 women (54.37%) and 198 men (45.63%) who were diagnosed with aphthae, which are small, isolated, multiple ulcerations, preceded by a vesicle with clean edges, with the bottom covered by a yellow-white deposit.

**RESULTS AND DISCUSSIONS**

Certain diseases are associated with the frequent occurrence of oral aphthae, Crohn's disease, celiac disease, Bechet's disease, systemic lupus erythematosus and HIV/AIDS infection.

Relapsed aphthosis (recurrent, bipolar) = oral aphthosis plus genital aphthosis, or Touraine’s major aphthosis - an aphthosis in which the oral aphthae are associated, aphthae in other regions plus other non-aphthous manifestations: vascular, cutaneous, joint, ocular. Such as:

Behcet’s syndrome is a chronic condition characterized by recurrent ulcerations of the oral, genital mucosa and eye lesions. Unknown etiology. Some authors admit the viral origin, others the Rickettsial one, arguing by means of the positive agglutination evidence in some cases.

Also, in some cases anti-mucosal antibodies and hyperggammaglobulinemia were highlighted, which made some authors consider it to be an autoimmune disease.

The clinical picture includes oral, genital ulcers, ocular lesions associated with skin lesions of pyodermitis.

The first manifestation consists of oral or genital ulceration, followed at variable intervals - from a few days to a few months, by iridocyclitis or by the impairment of other organs; painful oral and genital aphthous ulcerations, with white – yellowish deposit plus ocular lesions (uveitis, corneal ulcerations, chorioretinitis, vasculitis) plus various skin lesions (sterile pustules, ulcers, polymorphous erythema, migratory thrombophlebitis, skin hypersensitivity to the needle sting).

Then a lot of minor inconstant manifestations, such as joint manifestations, vascular lesions, nervous, digestive, renal, pulmonary phenomena, etc.

There may be one or more ulcerations, appearing continuously or at large intervals, over a period of months or years. Genital ulcerations are smaller and located at the base of the penis or on the labia.

There are cutaneous lesions in the form of follicular pustules and ocular lesions (uveitis, photophobia, conjunctivitis). The bouts are accompanied by fever, arthralgia and thrombophlebitis.

It is recommended to use antibiotics and vitamins from group B. As a preventive measure, good oral and dental hygiene and avoidance of food producing bouts are recommended.

**CONCLUSIONS**

The lack of vitamins and micro-nutrients can cause the appearance of oral aphtha; emotional stress and local trauma or mucosal injury through brushing, dental prosthesis or hot foods, smoking can all be predisposing factors for the onset of aphthae.
Aphthae do not appear to be infectious, contagious or sexually transmitted; immune mechanisms are considered to play a role in genetically predisposed persons.

The characteristics of the skin must be normal, but in Bechcet’s syndrome, erythema multiforme, hand-foot-mouth disease, herpex simplex infection, lichen planus, lupus, varicella or smallpox the erythema may also be present.

Reducing pain and ulcer duration are the goals of the treatment. Studies have shown the effectiveness of corticosteroids and antimicrobials.

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