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## A Case History of the Recurrent Severe Oral Ulceration with the High *Helicobacter pylori* Content in the Stomach.

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### ABSTRACT

The paper provides the detailed description of the medical case, the schedule of treatment of the recurrent severe oral ulceration in the patient with the high *Helicobacter pylori* content in the stomach has been developed. For the fastest aphthae epithelialization, reduction of the recurrence rate, reduction of the patient's complaints not only the local treatment is required but also the general treatment with agreement of the schedule with gastroenterologist, neurologist. The treatment of the recurrent oral ulceration associated with *Helicobacter pylori* shall be integrated, individualized, etiopathogenic, substantiated, successive, dynamic, and symptomatic. Besides, performing the sparing professional prophylaxis during the first visit, sanitation of the mouth cavity at the initial signs of epithelialization promotes to the prevention of re-infection of the stomach and oral mucosa with *Helicobacter pylori*.

**Keywords:** Recurrent oral ulceration, *Helicobacter pylori*, eradication, oral cavity sanitation, professional oral hygiene.

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## INTRODUCTION

The oral mucosa like no other mucosa of the human body experiences the huge load caused by the continuous action of physical, chemical, mechanical, temperature stimuli as well as introduction of the infectious agents. Resistance to the action of the stimuli is to a large extent determined by the epithelium continuity which ensures performance of the barrier function related to the peculiarities of the structure and functions of the oral mucosa [1-3].

If there is any discomfort in the oral cavity a patient often begins to take the normal structure of the oral mucosa for pathology and at the best case he seeks medical advice, at the worst – self-medicates. This is due to the fact that according to the “relevance phenomena” the oral cavity occupies the second place after the eyes while the gastro-intestinal tract – the seventeenth place. This is why the patients mostly do nothing, not paying attention to the dyspeptic intestinal disorders and only after a long period of the disease progression they arrange a visit to a gastroenterologist.

The patients with the oral mucosa diseases often demonstrate cancerophobia. They visit a doctor in the depressed mood, are whining, querulous, take any treatment skeptically. The everyday tooth brushing often causes pain and discomfort in such patients this is why they quit cleaning the teeth worsening the situation in the oral cavity. Such state of the patients requires involvement of the related specialists: a psychologist, psychiatrist, and neurologist.

A dentist is often being a “point of contact” between a patient and a doctor of another profile. A dentist may notice on the oral mucosa the manifestations of common diseases (dry mouth may be indicator of diabetes, pallor of the soft and hard palate, burning of the tip of the tongue at rest suggests the cervical vertebral osteochondrosis) and send the patient to the relevant specialist (endocrinologist, neurologist) preventing in such a way the development of the major complications on the part of the different body systems.

By now it has been proved that the microorganism *Helicobacter pylori* (*H. pylori*) is an opportunistic pathogenic one and is being a part of the normal mucous microflora of the stomach and oral mucosa [4-6].

The number of the *H. pylori* carriers in Russia reaches 70 % of the population and the vast majority of them do not suffer from any GIT-diseases. At the same time only 12-15 % of people infected with *H. pylori* suffer from the gastroduodenal ulcer [7, 8]. The important role of this microorganism in the development of the MALT-lymphoma and gastric adenocarcinoma has been acknowledged [9-13].

The secondary reservoir of *H. pylori* is the oral cavity [14-17].

By the high content of *H. pylori* in the stomach we recorded such oral mucosa diseases as benign migratory glossitis, recurrent oral ulceration moderately-severe (up to 3 aphthae) and severe (multiple aphthae), erosive-ulcerative and bullous form of the lichen planus, flat and verrucous forms of leukoplasia, xerostomia, chronic atrophic candidiasis.

## MAIN PART

The case of the severe recurrent oral ulceration in the patient with the high stomach load with *H. pylori* is presented.

Patient, M, 31 y. o., medical record of a dental patient No. N-2022 visited the dental clinic of the State Budgetary Educational Institution of the Higher Vocational Education of the Ministry of Health of the Russian Federation with complaints of the erethistic ulcers in the oral cavity hindering the food intake and speaking.

The development of the disease: considers himself to be sick for over 6 years when the first aphtha in the oral cavity appeared, it epithelialized on its own and then reappeared again, as the years went by the number of the ulcers grew, the pain during the meal and at rest appeared. The patient demonstrates expressed cancerophobia, he is querulous, sleep is disturbed.

Previous and underlying diseases: chronic gastritis, duodenal ulcer, chronic cholecystitis, chronic pancreatitis, dysbacteriosis, frequent ARD, flue. The patient said that for 9 years he has been working in the hazardous furniture-producing industry where there is lot of the wood dust.

Findings of the visual examination: free opening of the mouth, smooth skin cover, regional lymph nodes enlarged, movable, not glomerated, painless by palpation.

The findings of the oral cavity examination: the oral mucosa reddened, moderately moistened, halitosis. CFE = 12 («C» = 5, «F» = 7, «E» = 0). The hygiene index by Green-Vermillion = 4 points. Aphthae at the right and left surfaces of the tongue, of the round shape with the dimensions 12x8 mm and 10x7 mm, respectively, aphtha at the tongue tip with the diameter of 3 mm, aphthae on the mucosa of the left and right cheeks with the dimensions of 5 mm and 4 mm in the diameter, respectively. Aphthae are extremely painful when touched, are located at the reddened base, covered with fibrinous pellicle that cannot be removed.

**Diagnosis:** Recurrent severe oral ulceration. Aphthae Mikulicz.

The EGD-report with the biopate analysis for the presence of *H. pylori*: Gastritis without signs of the mucosa atrophy. Duodenitis. Cicatricial deformity of the duodenum bulb. Hypotonia of the pyloric sphincter. The stomach mucosa bacteria load – high (+++), over 50 microbe bodies per HPF, at the microscope magnification x 630 (L. I. Aruin criteria, 1995).

## Recommended

### General therapy

- Consultation, treatment, case follow-up by the gastroenterologist for assignment of the eradication schedule (Rabeprazolom 20 mg, twice a day; Amoxicillin 1000 mg, twice a day; Clarythromycinum 500 mg, twice a day during 10 days).
- Consultation, treatment, case follow-up by the gastroenterologist for assignment of sedating medication (Valocordin, per 25 drops for the night, 1-1,5 months; Tenoten, per 1 tablet 3 times a days, 2 weeks; keep in the mouth until completely dissolved; then per 1 tablet twice a day for 2 weeks; then per 1 tablet once a day for 2 weeks).
- Bifiform was prescribed as the mandatory part of eradication per 2 capsules twice a day for 4 weeks, then per 1 capsule twice a day for 2 weeks.
- Immunomodulator Derinat, 0,25 % solution, to drop into each naris and the oral cavity per 2-3 drops 2-3 times a day during 3-4 weeks.
- Milife tablets, per 0,2 g twice a day for 4 weeks, then per 0,1 g twice a day for 2 weeks.
- Solcoseryl, per 2,0 i. m., daily, № 20.
- Milgamma per 2 ml, i. m., eod, № 10.
- Tavegil (Phencarolum, Suprastin, Claritine) per 1 tablet 3 times a day for 7 days; then per 1 tablet twice a day for 7 days; then per 1 tablet once a day for 2 weeks.
- Imudon, to resolve 5 tablets per a day for the cycle of 80 tablets. Begin the drug administration after having performed the occupational oral hygiene and oral cavity sanitation.

### Local treatment

- Professional oral hygiene.
- Oral cavity sanitation.
- Antimicrobial hygiene of the oral cavity. To clean the teeth twice a day, in the morning after the breakfast and for the night during 3-4 minutes which makes 400-450 double movements with a tooth brush. It is recommended to use the toothpaste Colgate Sensitive Pro-Relief and/or Sensodyne, the intermediate tooth brush. Hygiene of the tongue: to clean the back of the tongue twice a day with the rubber tongue brush Colgate or a tongue scraper. To clean after each meal with a tooth brush or hygienic toothpaste for 1-2 minutes or to use the electric toothbrush with a hydro masseur. To change the toothbrush every 3-4 weeks.

- Applications
  - Applications 0,1 % of the fermentation solution (chymotrypsin, trypsin, lysozyme) for 10 minutes twice a day during 7 days or a bath from the fresh chicken protein twice a day during 7 days.
  - Solcoseryl dental adhesive paste, to apply to the impaired oral mucosa areas twice a day, in the morning after the breakfast and for the night.
  - Derinat 0,25 % solution, applications for the problem oral mucosa areas during 35-45 minutes twice a day, during 2 weeks.

During the same visit after the previous application to the problem areas of the patient's oral mucosa of the Solcoseryl – dental adhesive paste the patient underwent the sparing professional sanitation of the oral cavity with the use of the ultrasound scaler, abrasive paste "Detartrine Z", circular brushes, rubbers, strippers. The revisit was appointed in 2 days for the oral cavity examination and performance of the professional oral cavity sanitation.

### **II visit (3d day)**

Complaints of the erythemic ulcers in the oral cavity hindering the food intake and speaking.

#### **Findings of the visual examination**

Free opening of the mouth, smooth skin cover, regional lymph nodes enlarged, movable, not glomerated, painless by palpation.

#### **The findings of the oral cavity examination**

The oral mucosa is pale-pink, moderately moistened. The hygiene index by Green-Vermillion = 1,5 points. Aphthae at the right and left surfaces of the tongue, of the round shape with the dimensions 12x8 mm and 10x7 mm, respectively, the onset of epithelialization at the aphthae edged is to be seen, aphthae on the mucosa of the left and right cheeks with the dimensions of 3 mm and 2 mm in the diameter, respectively. Aphthae are moderately painful when touched, are located at the reddened base, covered with fibrinous pellicle that cannot be removed.

During the same visit after the previous application to the problem areas of the patient's oral mucosa of the Solcoseryl – dental adhesive paste the patient underwent the sparing professional sanitation of the oral cavity with the use of the ultrasound scaler, abrasive paste "Detartrine Z", circular brushes, rubbers, strippers. The revisit was appointed in 2 days for the oral cavity examination and performance of the professional oral cavity sanitation.

### **III visit (5<sup>th</sup> day)**

Complaints of the aphthae soreness in the oral cavity during the food intake.

#### **Findings of the visual examination**

Free opening of the mouth, smooth skin cover, regional lymph nodes enlarged, movable, not glomerated, painless by palpation.

#### **The findings of the oral cavity examination**

The oral mucosa is pale-pink, moderately moistened. The hygiene index by Green-Vermillion = 1,5 points. Aphthae at the right and left side surfaces of the tongue, with the dimensions 8x7 mm and 6x4 mm, respectively, at the epithelialization stage.

Aphthae are moderately painful when touched, are located at the reddened base, covered with fibrinous pellicle that cannot be removed. Aphthae at the tongue tip, on the left and right cheek mucosa have epithelialized. Revisit in 2 days for the oral examination.

During the same visit after the previous application to the problem areas of the patient's oral mucosa of the Solcoseryl – dental adhesive paste the patient underwent the sparing professional sanitation of the oral cavity with the use of the ultrasound scaler, abrasive paste "Detartine Z", circular brushes, rubbers, strippers. The revisit was appointed in 2 days for the oral cavity examination and performance of the professional oral cavity sanitation.

#### **IV visit (7<sup>th</sup> day)**

No complaints, the patient notes the significant improvement.

#### **Findings of the visual examination**

Free opening of the mouth, smooth skin cover, regional lymph nodes not enlarged.

#### **The findings of the oral cavity examination**

The oral mucosa is pale-pink, moderately moistened. The hygiene index by Green-Vermillion = 1,5 points. Aphthae at the right and left side surfaces of the tongue, with the dimensions 3x2 mm and 2x2 mm, respectively, at the epithelialization stage. Aphthae are moderately painful when touched, are located at the reddened base, covered with fibrinous pellicle that cannot be removed.

During the same visit after the previous application to the problem areas of the patient's oral mucosa of the Solcoseryl – dental adhesive paste the patient underwent the treatment of the teeth 2.6, 2.7 with the dentine caries diagnosed. Revisit is appointed in 3 days for the oral examination and continuation of the oral cavity sanitation.

#### **V visit (10<sup>th</sup> day)**

No complaints, the patient notes the significant improvement.

#### **Findings of the visual examination**

Free opening of the mouth, smooth skin cover, regional lymph nodes not enlarged.

#### **The findings of the oral cavity examination**

The oral mucosa is pale-pink, moderately moistened. The hygiene index by Green-Vermillion = 1,5 points. Aphthae at the right and left side surfaces of the tongue have epithelialized. Revisit in 2 days for oral examination.

The patient underwent the treatment of the tooth 3.5 with the chronic pulpitis diagnosed. Revisit in 4 days for the oral examination and continuation of the oral cavity sanitation.

#### **VI visit (14<sup>th</sup> day)**

No complaints, the patient came for the oral cavity sanitation.

#### **Findings of the visual examination**

Free opening of the mouth, smooth skin cover, regional lymph nodes not enlarged.

### The findings of the oral cavity examination

The oral mucosa is pale-pink, moderately moistened. The hygiene index by Green-Vermillion = 1,5 points.

The patient underwent the treatment of the teeth 4.5, 4.6 with the dentine caries diagnosed.

The patient received recommendation on the individual prevention of the H. pylori infection: to use the individual hygienic products; not to use the common unwashed dishes, to wash hands after the toilet and before the meal; to regularly visit the dentist for the preventive examination and performance of the professional oral sanitation.

### RESULTS

By assignment of the general and local treatment schedule after performance of the sparing professional oral sanitation during the first visit already the aphthae soreness is reduced on the 5<sup>th</sup> day, the initial signs of epithelialization are to be observed on the 3<sup>d</sup> day, complete healing of the severe aphthae is to be seen by the 10<sup>th</sup> day while in the absence of the combined treatment aphthae soreness persist up to 7-8 days, the initial signs of epithelialization appear on the 5<sup>th</sup> day, complete aphthae healing takes place by the 14<sup>th</sup> day.

### SUMMARY

H. pylori promotes to the increase in the severity of the oral mucosa diseases.

The treatment of the H. pylori-associated oral diseases shall be conducted together with the gastroenterologist along with the coordination of the general and local treatment schedules with the neurologist for assignment of the sedative medication and prevention and treatment of cancerophobia.

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