© Wydawnictwo Aluna

Wiadomości Lekarskie 2019, tom LXXII, nr 5 cz I

**INTRODUCTION**

Food is an essential attribute of our daily life. However, in certain situations the constituents of food can serve as a catalyst for the formation of such a pathology as peptic ulcer. Not the last role in the formation of ulcerous defects under certain conditions play physical exertion, which is accompanied by sharp rhythmic contraction of the muscles of the anterior abdominal wall [1]. From this point of view, the interesting case of rapid formation of “kissing” ulcers of the duodenal bulb after physical exertion, which were preceded by the meal in the form of fresh cabbage salad, fresh cucumbers, tomatoes, and radishes.

**THE AIM**

To analyze the case of formation of “kissing” ulcers of the duodenal bulb.

**MATERIALS AND METHODS**

According to Order № 271 from 13.06.2005 of Ministry of HealthCare of Ukraine [2] a patient took comprehensive examination (№ 6420, 24.03.17), which included step-by-step pH-metry based on V.N. Chernobrovyi methods, esophagastroduodenoscopy (EGDS) based on general techniques, helicobacter infection test (HP) (helicobacter urease test and microscopic examination of stained smears), histological investigations of the gastric stump mucous, HELIC – test.

The study was conducted in accordance with the basic bioethical provisions of the Helsinki Declaration of the World Medical Association on the ethical principles of scientific 549 medical research involving human (1964-2008) and the order of the Ministry of Health of Ukraine No. 690 dated September 23, 2009, which was confirmed by the findings of the meeting of the Ethical Commission of Petro Mohyla Black Sea National University, Nikolaev No. 2 dated February 12, 2019.

**CASE REPORT**

Patient (man) В., 25 years old, asked 13.03.17 y. for the examination and treatment of a doctor-gastroenterologist.
of the clinical department of basic research laboratory on chronic Helicobacter Pylori infection of the Petro Mohyla Black Sea National University about periodic dull and acute pain in epigastria, feeling of heaviness after eating, heartburn after taking sour food. In history, it was found that the first manifestations (epigastric pain) appeared when he was 21 years old against the background of stress. In further aggravations became regular every year and were seasonal (spring/autumn). The current aggravation have appeared in a day after taking the meal for breakfast (fresh cabbage salad, fresh cucumbers, tomatoes, and radish), which was followed by prolonged physical exertion as lifting weights during the lunch time.

The following results were obtained when carrying out investigations:

**pH - metry (by V.N. Chernobrovyi method)**
Surname. First Name. Patronimic.: B., 25 years
Height: 180 cm; introduced 25 cm

<table>
<thead>
<tr>
<th>Test</th>
<th>Large curvature</th>
<th>Small curvature</th>
<th>Large curvature</th>
<th>Small curvature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microscopic analysis</td>
<td>Urease test</td>
<td>Urease test</td>
<td>Microscopic analysis</td>
<td>Urease test</td>
</tr>
<tr>
<td>(+ + +) Active form, mitosis</td>
<td>15 min</td>
<td>(+ + +) Active form, mitosis</td>
<td>15 min</td>
<td>(+) Active form, mitosis; (+ + +) Cocci form</td>
</tr>
<tr>
<td>1. 2.79 1.68</td>
<td>11. 1.99 1.70</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. 2.80 1.63</td>
<td>12. 1.99 1.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. 2.81 1.64</td>
<td>13. 1.93 1.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. 2.84 1.78</td>
<td>14. 1.95 1.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. 2.85 1.70</td>
<td>15. 1.95 1.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. 2.59 1.71</td>
<td>16. 1.96 1.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. 2.49 1.70</td>
<td>17. 1.80 1.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. 2.40 1.68</td>
<td>18. 1.81 1.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. 2.41 1.69</td>
<td>19. 1.91 1.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. 2.40 1.69</td>
<td>20. 1.92 1.82</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. -</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. -</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. 10 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. 10 -</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. -</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0. -</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong>: 20 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Diagnosis**: Basal normacidity total. 24.09.16 y.

The following diagnosis was made when carrying out esophagogastroduodenoscopy: «Kissing» ulcers duodenal bulb in an active stage. Chronic gastritis type B ». When testing the gastric mucosa on HP infection for topographical zones were obtained the following results (table I).

While conducting examination of histological research the results have been obtained which confirms the presence of chronic active gastritis in all parts of the patient's stomach. When conducting the HELIK - test no. 7, 25.03.2017 year, the following results were obtained:

a) basic level: 0.5 mm;

b) load level: 6 mm;

c) growth rate: 5.5 mm;

d) conclusion about HP infection-infection (norm-growth up to 3 mm): positive (before treatment).

**DISCUSSION**
This case can be explained from the position of the new theory of ulcer forming - theory "caustic alkali spit" [1]. Juice of cabbage that exudes while cutting this vegetable, has a distinct stimulating effect on the secretion of the stomach, which leads to increased levels of acidity in the stomach, so it is contradicted for people with gastritis with hyperacidity [7]. Nitrogenous fertilizers may exist in fresh cucumbers, tomatoes and radish, which was followed by prolonged physical exertion as lifting weights during the lunch time.

Pylori infection, singling out the enzyme urea, converts urea into ammonia, which while combining with water forms ammonium hydroxide - caustic alkali, necessary bacteria to neutralization of excess hydrochloric acid around it [1, 10, 11, 12, 13, 14, 15]. However, some ammonia ("residual" ammonia (RA) does not participate in the process of neutralization of the hydrochloric acid, and fills the stomach. With physical rhythmic stress, according to a new theory, effect of "bellows sound" occurs, when RA concentrates in a tight place – in the pillory channel and bulb of the duodenum, where the humidity is 98%. This leads to local formation on duodenal mucosa ammonium hydroxide at high concentration, causing damages to the mucous membrane, known as peptic ulcer [1]. Graphically, this process can be represented as follows (Figure 1).
CONCLUSIONS
1. An abrupt stimulation of secretion by cabbage juice and the presence of urea in vegetables, of which the salad was cooked, led to the formation of a large level of "residual ammonia" in the cavity of the stomach.
2. Physical strain finally formed the mechanism of ulcer formation.

REFERENCES
3. Avramenko AA. Reliability of stool test when testing patients with chronic Helicobacter pylori in the presence of active and inactive forms of Helicobacter pylori infection on the gastric mucosa. Suchasna gastroenterologіya. 2014; 3 (77): 22–6. (Ru).


The work is a fragment of research work «Development of information and communication technologies in the system of medical examinations of seamen», the state registration number 0109U008375.

Conflict of interest: The Author declare no conflict of interest.

CORRESPONDING AUTHOR
Anatoly A. Avramenko
Petro Mohyla Black Sea National University, Mykolaiv, Ukraine
tel: +380976371807
e-mail: aaahelic@gmail.com

Received: 18.03.2019
Accepted: 02.05.2019