Research article

A.Svintsitskyy [1]
I.Korendovych [1]
O.Kuryk [1, 2, 3]
G.Solovyova [1, 2]

[1] Bogomolets National Medical University, Kyiv
[2] Medical centre "Universal clinic Oberig", Kyiv
[3] State Scientific Institution "Scientific and Practical Center of Preventive and Clinical Medicine" of Public Administration, Kyiv

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MORPHOLOGICAL CHANGES OF GASTRIC MUCOSA DEPENDING ON FUNCTIONAL DYSPEPSIA SYNDROME

The study was performed as a part of research work "Improvement of diagnostics in compined pathology of gastrointestinal tract, cardiovascular system and locomotor apparatus considering the impact of endogenous and exogenous factors" (state registration number 019U000818).

ABSTRACT. Background. Chronic gastritis process of cell renewal in the mucosa is disturbed, leading to rapid movement of the generative cell zone without full differentiation into mature specialized area accommodation epithelial cells. The result of this process is the inability to fully function gastric glands. Crucial in the diagnosis of gastritis given the nature of the morphological changes of the gastric mucosa and preferential localization of these changes. **Objective.** To assess histological changes of gastric mucosa in patients with clinically different types of functional dyspepsia. **Methods.** Adult patients (18-65 years) with confirmed diagnosis of functional dyspepsia were eligible to participate. Biopsy specimens were taken from stomach due to the Houston-updated gastric biopsy sampling protocol for the next histological examination. One expert gastrointestinal pathologist assessed all tissue samples. Atrophy was assessed due to Operative Link for Gastritis Assessment (OLGA) staging system. **Results.** 75 patients were recruited, 42 of which had epigastric pain (I group) and 33 – postprandial distress syndrome (II group) due to Rome III criteria (2006). Antral and corpus atrophy were detected at the same frequency in both groups ($p>0.05$), however the stage of atrophy didn't exceed I in all cases. Complete antral metaplasia was revealed in 11 (26.2%) patients of the I group and 11 (33.3%) patients of the II one. Incomplete antral metaplasia was seen in 2 (4.7%) patients of the I group and 2 (6.1%) patients of the II one. No cases of corpus metaplasia or dysplasia were found. **Conclusion.** Our study didn't reveal statistically significant correlation between stage of gastritis, atrophic or metaplastic changes and clinical symptoms of functional dyspepsia.

✉ **o.kuryk@oberig.ua**

Citation:
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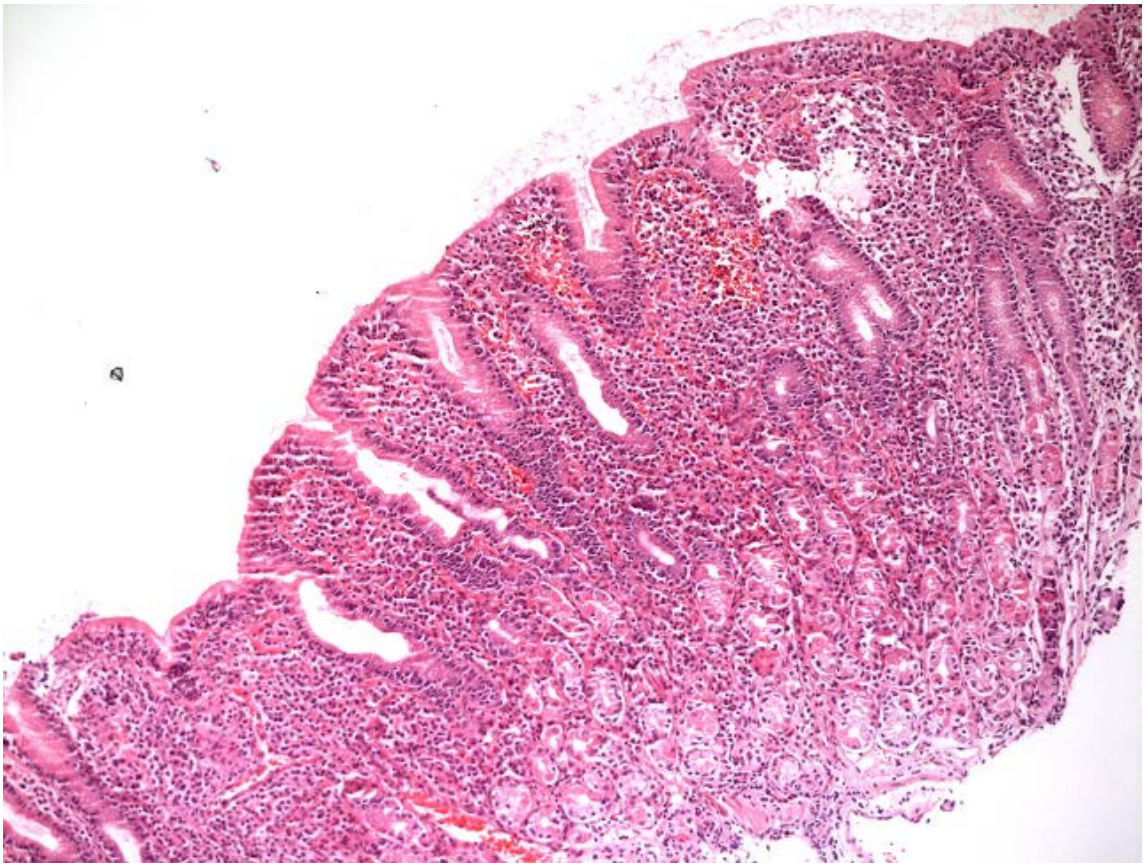

Fig. 1. Chronic active gastritis. Hematoxylin&Eosin staining. ×100

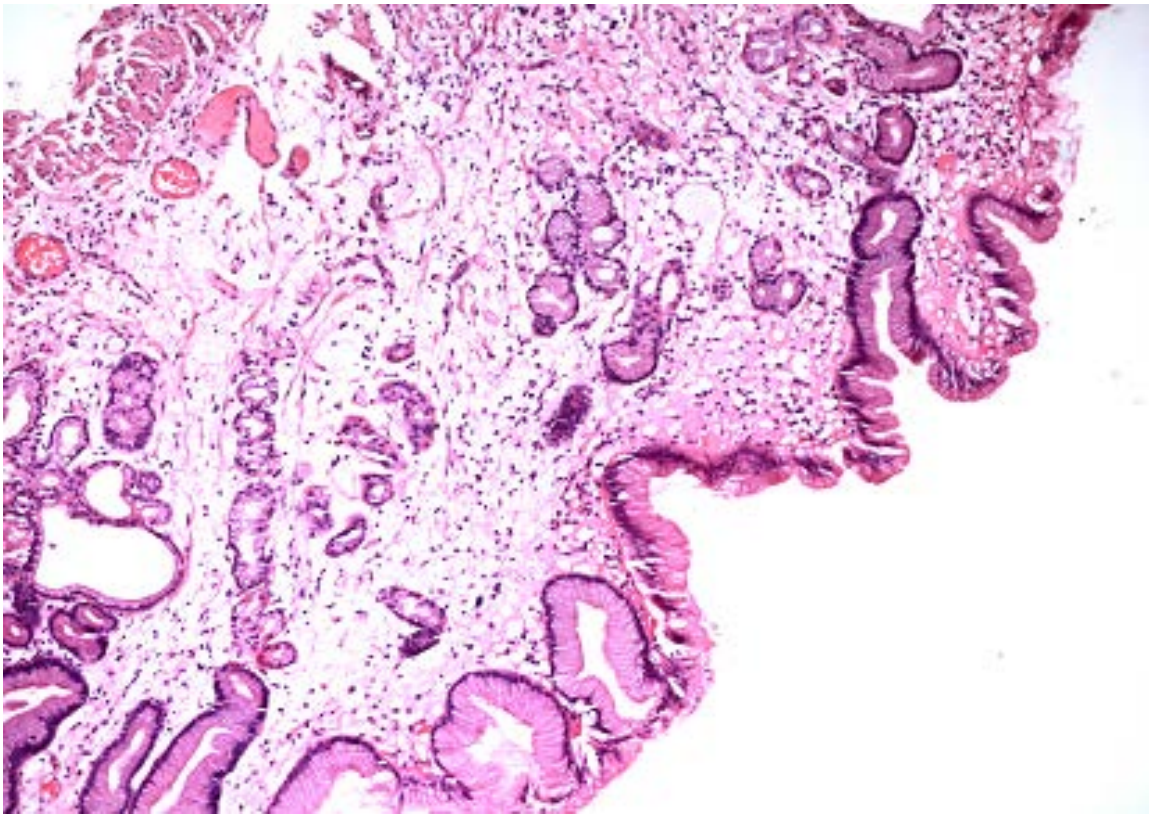

Fig. 2. Chronic atrophic gastritis – small number of glands and thick fibrous layers in the mucosa. Hematoxylin&Eosin staining. ×100.

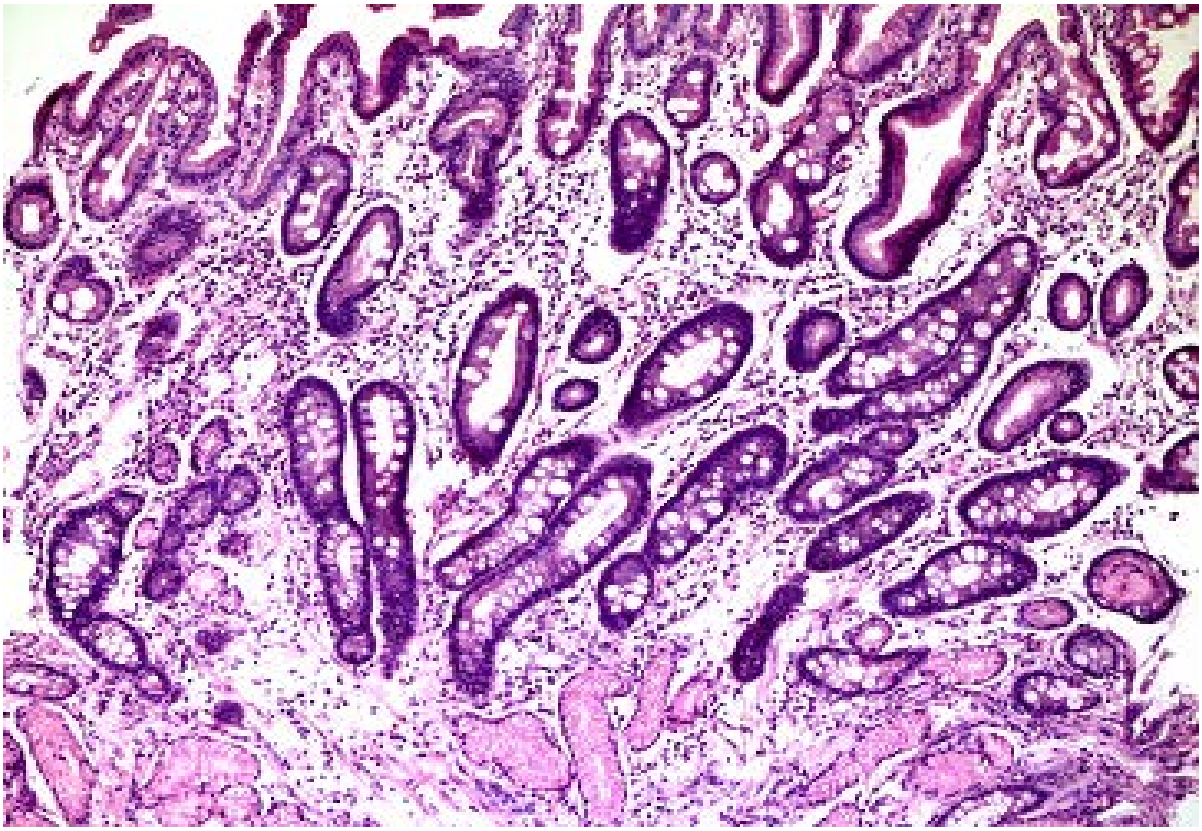

Fig. 3. Chronic atrophic gastritis with complete (intestinal) metaplasia. Hematoxylin&Eosin staining. ×100.

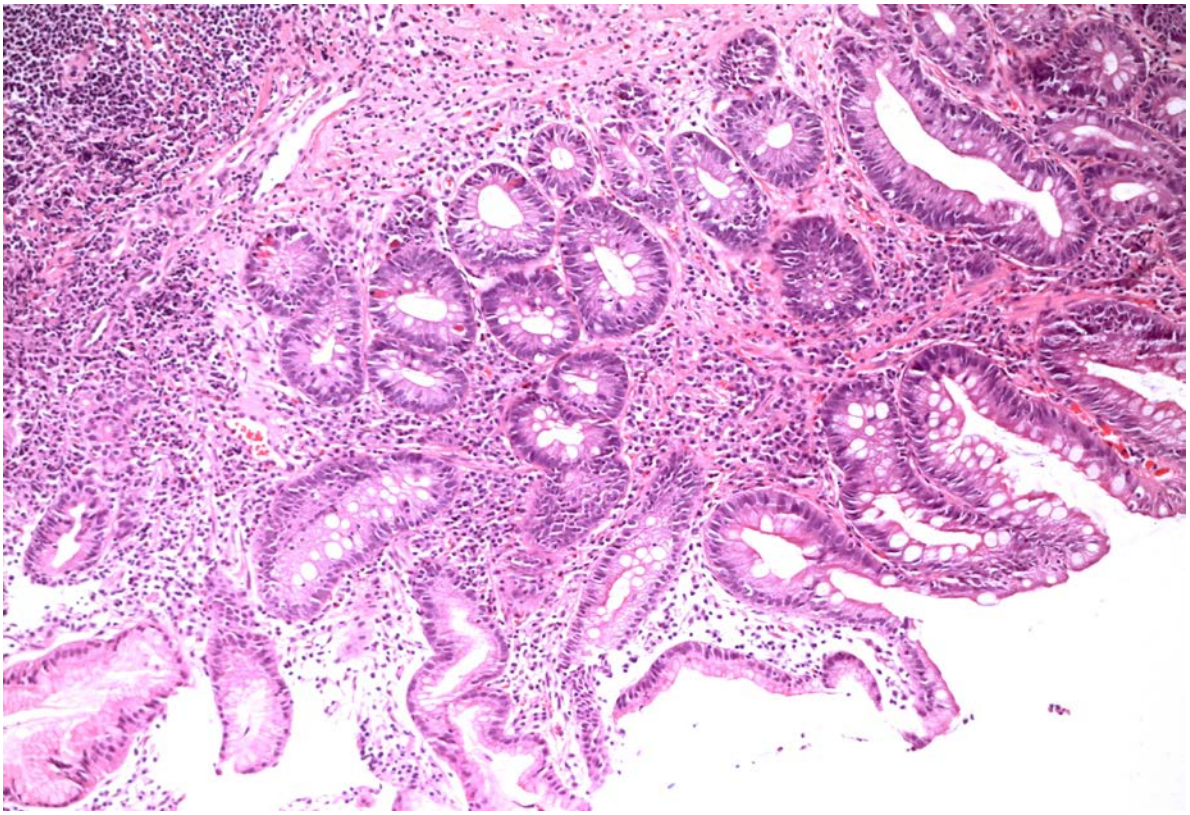

Fig. 4. Chronic atrophic gastritis with incomplete (colonic) metaplasia. Hematoxylin&Eosin staining. ×100.

References:

1. Drossman DA. The Functional Gastrointes-tinal Disorders and the Rome III Process. Gastroenterology. 2006;130:1377–90.

2. Pasechnikov VD, Chukov SZ, Kotelevets SM, Chabannaya TA. Morpho-functional comparisons in Helicobacter pylori – associated chronic atrophic gastritis. Annales Academiae Medicae Bialostocensis. 2005;50:183-7.

3. Kalinin AV. [Symptomatic gastroduodenal ulcers and peptic ulcer disease]. Russian J Gastroenterol, hepatol and coloproctol. 2004;3:22-31. Rus-sian.

4. Lapina TL. [Antacids and dyspepsia]. Pharmateka. 2007;13:67-9. Russian

5. Yagi K, Nakamura A, Sekine A. Characteristic endoscopic and magnified endoscopic findings in the normal stomach without Helicobacter pylori infection. J Gastroenterol Hepatol. 2002;17(1):39-45.

6. Yao K, Matsui T, Iwashita A. Clinical application of magnification endoscopy with NBI for diagnosis of early gastric cancer. Endoscopy. 2007;104(6):782-9.

7. Aruin LI., Kapuller LL., Isakov VA. [Morphological diagnostics of stomach and intestinal diseases]. Moskow: Triada-X; 1998. 483 p. Russian

8. Classen M. Endoskopie des oberen Verdauungstraktes. Perspektiven der Gastroenterologie. Fakten, Entwicklungen, Erwartungen. Muenchen-Wien-Baltimore; 1994. 914 s. German.

9. Sheptulin AA. [Chronic gastritis and functional dyspepsia: is there any way out of the impasse?]. Russian J Gastroenterol, hepatol and colo-proctol. 2010;20(2):84-8. Russian.

10. Ivashkin VT, Sheptulin AA, Lapina TL. [Chronic gastritis, induced by Helicobacter pylori infection: diagnostics, clinical course, prognosis. Guide for Physicians]. Moskow: RGA; 2009. 23 p. Russian.

11. Puverova KV, Lapina TL, Ivashkin VL. [Significance of serum pepsinogen I, pepsinogen II and G-17 indicators in the diagnosis of atrophic gastritis]. Russian J Gastroenterol, hepatol and coloproctol. 2005;3:48-51. Russian.