MORPHOLOGICAL CHARACTERISTICS OF BARRETT’S OESOPHAGUS

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In 1950 N. Barret (2) described special morphological changes in the oesophagus manifested by replacement of the squamous epithelium in its distal part by a columnar one similar to that of the stomach. However, nowadays the so-called Barrett’s syndrome is still poorly known and studied by endoscopists and pathologists as well.

The purpose of our investigation based on prospective biopsic material from the oesophagus was to characterize this process in the oesophagus, including frequency, age and morphological peculiarities.

During a period of five years (1987-1991) 31 patients with morphological diagnosis Barrett’s oesophagus were investigated. The oesophageal biopsy materials were processed by the routine (morphological and histochemical) methods.

The established frequency - 11.8% of the Barrett’s oesophagus out of all the pathological processes in oesophagus for the same period is not essentially different from that in the literature - 10-12% after Wyndham (10), Law and Sheehan (7) or 13% after Baverly and Rothstein (3/). The average age of the patients is 61.8 ± 10.8 years, fluctuating between 28-84 years. The male/female ratio 1.06:1.0. The established average age of our patients is very close to the announced by other authors (65.0 ± 14.4 years after Kellin et al. (5). But the equal affection of both sexes in our material varies from the results of Chissov et al. (1) where men are in predominance, i.e. 3.2:1.0. The morphological characteristics of Barrett’s oesophagus reveals different patterns. Most commonly (51.6%) metaplastic epithelium resembled the stomach cardial mucous membrane. On second place (35.5%) the covering and glandular epithelium looked like that of the fundic mucosa. In 12.9% the metaplastic areas showed similarity with the small intestinal mucous membrane. Lapertoza (6) in his materials found the same distribution of different kinds of metaplasia while others - Rindi et al. (8), Stanley et al. (9 - established fundic and combined types preponderance.

The three morphological types of Barrett’s oesophagus in our results are very convenient for diagnostical work. The determination of other subtypes suggested by some authors could hardly be of practical value. In our opinion the cellular and structural peculiarities of dif-
ferent types of Barrett's oesophagus probably reflect following one by another processes (metaplasia, proliferation, differentiation and dysplasia). In this aspect the cardial mucosa may be regarded as the lowest level of differentiation, the cylindrical epithelium being further transformed into specialized type of chief, parietal and enteric cells thus determining a higher level of differentiation to fundic and intestinal type of mucous membrane in Barrett's oesophagus.

In 44.4% we established foci of intestinal metaplasia type IIb (after Jass /4/) in fundic and cardial type of Barrett's oesophagus. Histochemical investigation shows that mucin secretion in the metaplastic regions is transformed similarly as type IIb intestinal metaplasia (appearance of sulfomucines). Adenocarcinoma developing in the Barrett's oesophagus was found in 16.1%. The cardial Barrett's oesophagus is the commonest type leading to malignization. In 83.3% carcinomas have occured on the basis of severe dysplasia and in 100% at mucine secretion like of type IIb intestinal metaplasia.

In conclusion, the histological type of Barrett's oesophagus, the kind of mucin secretion and the presence of dysplastic changes are considered important markers of malignization and should be included in the morphological diagnosis.