Introduction

Goblet cell carcinoid (GCC) is a rare neuroendocrine tumor of the vermiform appendix with uncertain clinical behavior. It was first described by Gagné and Subbuswamy in 1969 and 1974, respectively. The tumor occurs almost exclusively in the vermiform appendix. We present a case of a 60-year-old female, who was referred to the Bielanski Hospital with signs and symptoms of acute appendicitis. Microscopic examination of the appendix showed features of acute appendicitis, however scattered groups of cells with clear cytoplasm as well as strands of single cells with no evidence of atypia were seen. The patient underwent a right hemicolectomy due to the diagnosis of GCC.

Key words: goblet cell carcinoid, neuroendocrine tumors, adenocarcinoid, appendix.

Case report

A 60-year-old woman was referred to the Bielanski Hospital with right lower quadrant pain, anorexia, nausea and vomiting. Physical examination revealed right lower quadrant abdominal tenderness and localized rebound tenderness. No palpable abdominal mass was present. Due to signs and symptoms typical of acute appendicitis, the patient underwent a simple append-
Goblet cell carcinoma of the vermiform appendix is a rare tumor with uncertain clinical behavior and presumed dual, neuroendocrine and intestinal goblet cell differentiation. Goblet Cell Carcinoid (GCC) occurs in the vermiform appendix equally in men and women in the age range of 18-89.

Tang et al. reviewed 63 cases of appendiceal lesions showing histological features of GCC in at least a portion of the tumor [7]. The authors included cases diagnosed originally as GCC, adenocarcinoid, mixed carcinoid adenocarcinoma, adenocarcinoma with neuroendocrine differentiation, adenocarcinoma of the signet ring cell type and carcinoid tumor. All cases were classified based on histological features of the primary lesion as typical GCC (group A), adenocarcinoma ex GCC, signet ring cell type (group B) and adenocarcinoma ex GCC, poorly differentiated adenocarcinoma type (group C) [7]. Clinical significance of MIB1 (Ki-76) staining in GCC is controversial [7, 11].

Genetic studies of 16 cases of GCC revealed allelic loss of chromosomes 11q, 16q, and 18q in most of goblet cell carcinoids which are similar to those seen in ileal carcinoids and different from those of appendiceal adenocarcinoma. Results of this study suggest a putative common tumor suppressor gene in the pathogenesis of GCC and ileal carcinoids [12]. Tang et al. hypothesized that in the process of transformation of GCC to adenocarcinoma, additional genetic changes accumulate and facilitate the transformation [7].

Goblet cell carcinoids present most frequently with an associated appendicitis. It is believed that appendicitis is caused by a diffuse growth of the tumor. In the entire length of the appendix, including the appendiceal base. Only in one study most of the cases of GCC presented with a palpable mass as a primary symptom and some cases presented initially at an advances clinical stage [7].

References
Fig. 1. A-D. Microscopic image of clear cells infiltrating the wall of the appendix (HE; 400×); E – CK20 stain of the tumor cells; F – Focal chromogranin stain can be seen


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