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## ASPECTS OF THE ETIOLOGY OF EXTRAORGANIC RETROPERITONEAL CYSTS

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**ABSTRACT** — Etiology of primary extraorganic retroperitoneal cysts is most often a disorder of embryonic development. The most common causes of secondary cysts are trauma and surgical interventions in the past. We analyzed 28 case histories of patients with extraorganic retroperitoneal cysts. After surgical removal 13 cysts turned out to be primary, other 15 — secondary cystic formations. Malignant condition was found in 2 primary cysts. We came to the conclusion that primary extraorganic retroperitoneal cysts develop due to impaired embryonic development and can be divided into enteric, bronchogenic, urogenital, dermoid, mesothelial and lymphatic cysts. The etiology of secondary cysts is determined by the presence of a history of abdomen or back trauma, as well as the surgery that was performed in the past by laparotomy or retroperitoneal access.

**KEYWORDS** — extraorganic retroperitoneal cyst, primary and secondary cyst, embryonic development, trauma, surgery.

### INTRODUCTION

The question of the occurrence of extraorganic retroperitoneal cysts (EORC), despite the increase in their incidence in recent decades, is poorly understood and is addressed only by single researchers, who describe mainly single observations of this pathology [1, 2, 3, 4, 5]. The lack of a unified classification of the EORC lies at the heart of a methodological problem that leaves a number of issues unresolved.

Etiology of primary cysts is most often a disorder of embryonic development [6]. The most common causes of secondary EORC are trauma noted by patients at different times of life, or any manipulations during surgical interventions on the organs of the abdominal cavity and (or) retroperitoneal space [7, 8]. Sometimes the cause can be an inflammatory disease of the retroperitoneal organs, such as acute pancreatitis [8, 9].

The basis of this study includes unresolved issues that determine and clarify the causes of true and false EORC.

### MATERIALS AND METHODS

We analyzed 28 case histories of patients who were treated at the Tver Regional Oncology Center from 2010 to 2017. All patients underwent surgery to remove retroperitoneal extraorganic cyst.

### RESULTS

On a histological examination of 28 preparations, 13 cysts turned out to be true (primary), the wall of which was lined with various types of epithelium: 8 — stratified squamous (dermoid cyst), 2 — single-row cubic (mesothelial cyst), 1 — multilayer ciliary prismatic (bronchogenic cyst), 1 — cylindrical epithelium intestinal type (enteric cyst), 1 — transitional (urogenital cyst). It should be noted that atypical cells are detected in the wall of two true cysts. In one case a highly differentiated intestinal adenocarcinoma was determined, in another — cancer in situ in the transitional epithelium.

15 cystic formations were recognized as false (secondary), because they did not contain epithelial lining. Their wall was represented by fibrous tissue. At a histological examination of the walls of the false EORC, atypical cells were not detected.

From the history of life it is known that the abdomen trauma was noted in 9 patients with secondary EORC (60%). 5 patients with false cysts (33%) and 1 patient with a true cyst (8%) underwent surgery in the past by laparotomic or retroperitoneal access.

### CONCLUSION

Based on the results of the study and the analysis of literature data we came to the conclusion that primary extraorganic retroperitoneal cysts develop due to impaired embryonic development and can be divided into enteric, bronchogenic, urogenital, dermoid, mesothelial and lymphatic cysts. The etiology of secondary retroperitoneal extraorganic cysts, in contrast to true cysts, is determined by the presence of a history of abdomen or back trauma, as well as the surgery that was performed in the past by laparotomy or retroperitoneal access.

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