Features of the microbial spectrum gallbladder bile obtained during duodenal sounding in patients with cholelithiasis

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Summary

Patients aged 57, 8 ± 14, 4 years, with painful form of cholelithiasis were under study. The microbial spectrum of gallbladder bile obtained from the gall bladder intra –operationally - during cholecystectomy and duodenal sounding was analyzed. Statistically significant differences in the frequency of bacteriocholia in patients with cholelithiasis at the duodenal and intrabladder bile sampling were not revealed. In the bile, taken at the duodenal sounding, a statistically significant excess of conditionally pathogenic microorganisms: Streptococcus and Candida fungi groups, represented in the oral cavity, was revealed, which should be considered when interpreting the microbial spectrum of duodenal bile aspirate and addressing the need for antibiotic therapy.

Keywords: bile, bacteriocholia, cholelithiasis, diagnostics.

Introduction. Adequate selection of antibiotic therapy for inflammatory diseases of the gallbladder and biliary tract is a major problem in hospitals around the world [1,4,6]. Noted the increasing role of gram-positive bacteria and fungi [3,6]. The most relevant pathogens of nosocomial infections are microorganisms of the family Enterobacteriaceae. [1] Staphylococci in bile detected in 14-30% of cases [4].

Fence bile on research in therapeutic departments of hospitals traditionally performed during duodenal sounding. [2] Conducting bacteriological study of bile from the gall bladder is only realized in the surgical department of the hospital - intraoperative [2].

The purpose of this study was to determine the features of the microbial spectrum of gallbladder bile obtained during intra-duodenal sounding and gallbladder puncture in patients with painful form of gallstones (cholelithiasis).

Materials and methods. In the surgical ward and the clinical diagnostic clinic EDO Khanty-Mansiysk examined 142 patients aged 57,8 ± 14,4 years, with painful form of cholelithiasis. Group consisted of 74 people who have a fence was made of bile from the gall bladder intra - during cholecystectomy. Study group comprised 58 patients with gallbladder bile fence, made in the course of duodenal sounding (see table).

Bile samples were examined for anaerobic and facultative anaerobic opportunistic microbes. Initial seeding material and identification of isolates was carried out according to the Methodological guidelines [5]. Reliability of the results interpreted using the Pearson goodness of fit chi-square test - $\chi 2$.

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Results. Microflora in the bile of a comparison group of patients detected in 43% of cases in the study group - in 58% of cases ($p > 0,05$; see table).

In the microbial spectrum of bile in patients comparison group dominated gram-negative bacteria (63%): the genus Escherichii Klebsiellae and in 70% of cases (see Table 1).

Gram-positive organisms in the control group (37%) presented cocci: the genus Enterococcus, Staphylococcus and Streptococus in 85%, which corresponds to the literature [4].

In the main group a statistically significant excess of Gram-positive microorganisms when

compared to the comparison group, mainly due to the genus Streptococus and Staphylococcus (p <0.05, see table).

Microbial spectrum of gram-negative microorganisms in the study group before and bacteria of the genus Escherichii Klebsiellae, which corresponds to the control group (p> 0,05; see table).

Conclusion. Statistically significant differences in the frequency of bakterioholii patients with cholelithiasis and duodenal bile intrapuzyrnom fence is not revealed.

In patients with gallstone in the bile, resulting in intrapuzyrnom fence, in 63% of Gram-negative bacteria are sown, and presented native Escherichii Klebsiellae.

In the bile, resulting in duodenal sounding, a statistically significant excess of conditionally pathogenic microorganisms: genus Streptococus and fungi Candida, presented in the oral cavity, which should be considered when interpreting the microbial spectrum of duodenal aspirate bile and addressing the need for antibiotic use.

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