SUMMARY

Gastrointestinal toxicity is one of the most frequent side effects of antitumor chemotherapy and radiotherapy. The diagnosis and assessment of severity of intestinal mucosal damage in cancer patients treated by chemotherapy or radiotherapy rely on anamnestic data. No laboratory tests are routinely used to objectively assess the extent of mucosal damage. The testing of intestinal permeability is based on differential permability of intestinal mucosa to molecular markers, including mono- and disacharides.

There was retrospectively evaluated results of treatment from the view of clinically evaluated gastrointestinal toxicity in 41 patients with inoperable esophageal cancer, 36 patients with gastric cancer, 22 patients with biliary tract cancer, 81 patients with rectal adenocarcinoma treated by preoperative neoadjuvant chemoradiotherapy and 52 patients with rectal adenocarcinoma treated by postoperative adjuvant chemoradiotherapy.

Gastrointestinal toxicity of antitumor treatment was evaluated by lactulose – mannitol test in 11 patients with clinically manifest gastrointestinal toxicity after chemotherapy, 10 healthy volunteers, 24 patients with untreated tumors, 17 patients with rectal adenocarcinoma treated by chemoradiotherapy, 22 patients treated by gefitinib, 8 patients with gastrointestinal stromal tumor treated by imatinib mesylat, 12 patients with colorectal adenocarcinoma treated by raltitrexed and 6 patients with colorectal adenocarcinoma treated by irinotecan.

Testing of intestinal permeability by non-metabolized sugars represent a valuable tool for non-invasive objective assessment of intestinal toxicity of antitumor chemotherapy and radiotherapy. In interpretation of results of lactulose – mannitol test, it is important to consider how much is damage of intestinal barrier caused by antitumor treatment and how much by other factors. A possible approach to reduction of gastrointestinal toxicity can be brachytherapy and hyperthermia.