The effect of medication intake on perforation rate in patients with colonic diverticulosis – A retrospective assessment

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Aim: The aim was to study the effect of drug intake on the frequency of perforation among patients with colonic diverticulosis.

Introduction: Diverticulosis is a common condition which incidence increases with age. One of the most severe complications with a high risk of late sequel and mortality is perforation of colonic diverticula. According to the current studies the use of some medications may affect the risk of perforation due to its influence on the intracolonic pressure and mucosal barrier function.

Methods: A retrospective review of 294 patients (mean age 68.6) with verified colonic diverticulosis was done. Included patients were admitted to 2nd Department of General Surgery JU MC during 2006–2016. Study enrolled 206 (70.1%) women and 88 (29.9%) men. Among investigated group 36 (12.2%) patients developed perforation.

The research regarded medications including NSAIDs, corticosteroids, calcium–channel blockers, statins, opioids, aspirin, anticoagulants and antiplatelet drugs. In addition, the data concerning comorbidity and the severity of the diverticulitis was collected.

Results: In the analysis the group of patients with perforation and the group with non-perforated diverticulosis were compared. Higher rates of the use of NSAIDs (13.89% vs. 3.88%; OR = 4; p = 0.01; 95% CI = 1.28–12.46), opioids (11.11% vs. 1.55%; OR = 7.94; p < 0.001; 95% CI = 1.89–33.3) and corticosteroids (22.22% vs. 8.14%; OR = 3.22; p = 0.01; 95% CI = 1.31–7.96) were observed among the patients with perforation. The results revealed an inverse relation concerning the use of statins (5.56% vs. 22.09%; OR = 0.21; p < 0.001; 95% CI = 0.05–0.89). Similar results were found in the review of available literature.

Conclusion: Medications used by patients with colonic diverticulosis affect the incidence of perforation. The administration of NSAIDs, corticosteroids and opioids is related to an increased rate of diverticular perforation. Conversely, statins may contribute to the decrease in the frequency of perforation. We can conclude that it is important to carefully administer drugs to patients with colonic diverticulosis.

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