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 JUMC 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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De novo atrial fibrillation following aortic valve replacement surgery is associated with decreased creatinine clearance and increased C-reactive protein levels

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Aim: We aim to assess the prevalence of de novo postoperative atrial fibrillation (POAF) in patients submitted to aortic valve replacement surgery (AVRS) and evaluate clinical and echocardiographic variables as predictors of POAF occurrence in this population.

Introduction: POAF is the most common complication following cardiac surgery, with peak incidence in the second day after the surgical procedure. Studies have demonstrated an increase in the incidence of stroke, hospital stay, health–associated costs and mortality in the group of patients experiencing POAF.

Methods: We conducted a cross-sectional study, that included all the patients submitted to AVRS during 2014 in a tertiary hospital, diagnosed with severe aortic valve stenosis without endocarditis, known history of atrial fibrillation, more than one major procedure, or other significant valve disease. Data were collected retrospectively and the statistical tests were performed according to the variable classification.

Results: The incidence of POAF in the 173 included patients was 45%, with the median time of occurrence being 2.4 ± 1.5 days. A univariate analysis showed that the group of patients who developed POAF was older (p = 0.028), had longer median in-hospital stay (p = 0.008), had a significantly higher C-reactive protein (CRP) peak blood level (p = 0.025) and a significantly lower minimum creatinine clearance (p = 0.026) in the post-operative period when compared with those who did not develop POAF. A multivariate analysis confirmed age to be an independent predictor of POAF. (OR: 1.04, CI 95%: 1.00–1.09).

Conclusion: Our study suggests age, peak post-operative blood level of CRP and creatinine clearance as predictors of POAF occurrence and supports the hypothesis that POAF may be the result of inflammation, being one of the few studies that focuses on a population with isolated aortic stenosis. Our findings on increased hospital stay reinforce the idea of risk stratification and the use preventive measures in the higher risk groups.

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Predictors of early reoperation after meningioma removal

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Aim: The aim of our study was to establish predictors of unplanned early reoperations after meningioma removal.

Introduction: Complications after neurosurgical procedures which lead to reoperation are associated with poor treatment outcome and costs. The knowledge of risk factors for complications might allow to implement specific preventive measures. However those factor are still poorly defined, especially in terms of benign brain tumours.

Methods: We retrospectively analysed 177 patients, with histologically confirmed meningiomas, hospitalized between 2014 and 2016 who underwent craniotomy. From medical records