

Surgery Paralell Oral Session
Friday, September 15th, 14h00

PS130

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; $p = 0.02$; 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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PS025

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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PS050

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



we obtained detailed medical history (previous diseases, medications, tumour characteristics, blood test results, surgery's details). Completeness of tumour resection was assessed using Simpson Grade. Early reoperation was defined as reoperation during the same hospital stay. We used χ^2 test for proportional values; *t*-student test, Mann–Whitney *U* test for continuous variables. To determine the potential predictors of early reoperation we used univariate and multivariate logistic regression analyses.

Results: A total of 13 (7.34%) patients underwent unplanned early reoperation. Those patients significantly more often had retromastoid craniotomy (25.00% vs. 6.40%; $p=0.047$). And significantly more often suffered from ischemic heart disease (66.67% vs. 6.64%; $p<0.01$) and atrial fibrillation (60% vs. 6.25%; $p<0.01$). Reoperated patients also more often took heparin (50% vs. 6.74%; $p<0.01$) and anticoagulants (66.67% vs. 6.21%; $p<0.01$). In multivariate logistic regression analysis anticoagulants intake (OR: 31.463; 95% CI: 1.139–868.604; $p=0.04$) and retromastoid craniotomy (OR: 6.642; 95% CI: 1.139–38.73; $p=0.034$) remained independently associated with higher risk of early reoperation.

Conclusion: Patients who underwent retromastoid craniotomy, those with history of ischemic heart disease or atrial fibrillation and those who take heparin and anticoagulants are more likely to require early reoperation. Retromastoid craniotomy and anticoagulants intake are independent risk factors for early reoperation.

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PS095

Prevalence of foramen arcuale and its clinical significance: A meta-analysis of 55,985 subjects

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Aim: The aim of this study was to deliver the most complex study on the prevalence of the FA and its clinical significance.

Introduction: Foramen arcuale (FA) is an osseous prominence formed in place of a sulcus for the vertebral artery on the posterior arch of the atlas. The presence of an FA can make a threat during neurosurgery by giving a false notion of a wider posterior arch when viewed dorsally during C1 lateral mass screw insertion.

Methods: An comprehensive search of the major electronic databases was performed in order to find and identify all studies which reported relevant data on the FA. No date or language restrictions were applied. Data on the prevalence, type (complete

and incomplete), side, gender, laterality, and morphometrics of the FA were extracted and pooled into a meta-analysis.

Results: A total of 127 studies ($n=55,985$ subjects) were included into the quantitative analysis. The overall pooled prevalence of a complete FA was 9.1% (95%CI: 8.2–10.1), while the overall pooled prevalence of an incomplete FA was 13.6% (95%CI: 11.2–16.2). The complete FA was found to be most prevalent in North American (11.3%) and European (11.2%) populations, and least prevalent among Asian (7.5%) populations, especially Chinese (4.4%) and South Koreans (5.8%). In the presence of a complete FA, a contralateral FA (complete or incomplete) was found in 53.1% of cases.

Conclusion: The FA is a commonly present anatomical structure. Awareness of a complete variant of the FA during procedures performed on the atlas vertebra is essential in reducing the risk of iatrogenic injury. Therefore, risk for the presence of an FA should be considered by surgeons prior to procedures on the atlas in each patient according to gender and ethnic group. As such, we highly advise preoperative screening with CT as the gold standard for finding the presence of an FA.

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PS136

Quality of Life and aortobifemoral bypass – Importance of the hypogastric arteries



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Aim: Evaluate SD after AFB and assess the importance of patent hypogastric arteries before the procedure.

Introduction: The aortobifemoral bypass (AFB) is one of the best options to revascularize patients with Aortoiliac Occlusive Disease (AIOD). The impact of this procedure in sexual function (SF) is unpredictable, with 20–80% of the patients reporting sexual dysfunction (SD) after surgery. There's still insufficient data to safely predict the development of SD after AFB and what the role of hypogastric arteries.

Methods: The study includes only male population submitted to AFB due to AIOD. Patients with major amputations after the surgery were excluded. The development of SD was evaluated by phone call. The quality of life before and after the procedure was evaluated by a standardized index score questionnaire (15D). Pre-operative patency of hypogastric arteries was appraised by assessing the patients imaging file. The arteries with direct anterograde flow were considered patent.

Results: Of a total of 53 patients, 40 were included in the study – exclusion causes were intrahospital death, natural cause death and major amputation. In the included group, 37% reported worsening, 26% improved and 37% did not notice any change in SF after surgery. If at least one of the hypogastric arteries was patent before surgery, 58% described worsening in SF compared to only 13% in the group with no sustained anterograde flow to the hypogastric arteries. 92% of the patients was not warned of the possibility of SD after surgery, being that 26% of these would have refused the procedure if they knew.

Conclusion: SD is a prevalent and often overlooked complication after open aortoiliac revascularization and it remains a major taboo in the surgeon/patient relation. The existence of at least one hypogastric artery with preserved anterograde flow before