

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  $\chi^2$  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.

**Acknowledgements:** To our Tutors: Jarosław Polak, MD, PhD and Roger Krzyżewski, MD.

<http://dx.doi.org/10.1016/j.pbj.2017.07.035>

## PS095

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

Przemysław A. Pękala<sup>1,2</sup>,  
Brandon Michael Henry<sup>1,2</sup>, Jakub R. Pękala<sup>1,2,\*</sup>,  
Wan Chin Hsieh<sup>1,3</sup>, Jens Vikse<sup>1,2</sup>,  
Beatrice Sanna<sup>4</sup>, Jerzy A. Walocha<sup>1,2</sup>,  
R. Shane Tubbs<sup>5</sup>, Krzysztof A. Tomaszewski<sup>1,2</sup>

<sup>1</sup> International Evidence-Based Anatomy Working Group, Krakow, Poland

<sup>2</sup> The Brain and Spine Lab, Department of Anatomy, Jagiellonian University Medical College, Krakow, Poland

<sup>3</sup> First Faculty of Medicine, Charles University, Prague, Czech Republic

<sup>4</sup> Faculty of Medicine and Surgery, University of Cagliari, Sardinia, Italy

<sup>5</sup> Seattle Science Foundation, Seattle, Washington, USA

E-mail address: [jr.pekala@gmail.com](mailto:jr.pekala@gmail.com) (J.R. Pękala).

**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.

<http://dx.doi.org/10.1016/j.pbj.2017.07.036>

## PS136

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



C. Braz\*, R. Castro-Ferreira, P. Dias, S. Sampaio, J. Teixeira

Faculdade de Medicina da Universidade do Porto, Portugal

E-mail address: [carolina.c.braz@gmail.com](mailto:carolina.c.braz@gmail.com) (C. Braz).

**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