Clinical Neurology and Neurosurgery 179 (2019) 66

Contents lists available at ScienceDirect

Clinical Neurology and Neurosurgery

journal homepage: www.elsevier.com/locate/clineuro

Bias in determining factors associated with early seizures after surgery of unruptured intracranial aneurysms

I was pleased to read the interesting work by Goji Fushihara et al. [1] recently published in Clinical Neurology and Neurosurgery journal. The aim of their study was to better define the incidence of and risk factors for early seizures after repair of unruptured intracranial aneurysms in modern microsurgical techniques. The results have demonstrated that History of dialysis (odds ratio [OR] = 77.6, 95% confidence interval [CI] 7.5–1783.4, $P < 0.001$), and presence of cerebral contusion (OR = 5.1, 95% CI 1.3–16.9, P = 0.02) or infarction (OR = 13.9, 95% CI 3.9–48.5, $P < 0.001$) detected by postoperative computed tomography were independent and significant risk factors. With all due respect, I think that the obtained results are biased as a result of dispersed data. The high value of OR as well as wide 95%CI because of large SD clearly showed this. Data presented in the study by the 2 × 2 table 2 demonstrated the small sample size. Therefore, concluding that "dialysis, postoperative cerebral contusion, and infarction are risk factors for early seizures after surgery of unruptured intracranial aneurysms" is a matter of controversy. Statistical methods such as Firth penalization and Data augmentation was proposed to deal with this issue [2,3]. I suggest the authors consider them in their analysis as well.

Disclosure

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors. In addition, the author declared that she has no conflict of interest.

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https://doi.org/10.1016/j.clineuro.2019.02.023
Received 17 February 2019
Available online 01 March 2019
0303-8467/