Contents

Volume 12 Issue 4 | JNIS April 2020

Editor's column

333 Robotics in neurointervention: the promise and the reality
F C Albuquerque, J A Hirsch, M Chen, D Fiorella

Commentary

335 Another version of the truth
M Levitz

New Devices and Techniques

338 First-in-human, robotic-assisted neuroendovascular intervention
V Mendes Pereira, N M Cancelliere, P Nicholson, I Radovanovic, K E Drake, J-M Sungur, T Kings, A Turk

341 Robotic assisted carotid artery stenting for the treatment of symptomatic carotid disease: technical feasibility and preliminary results
R G Nogueira, R Sachdeva, A R Al-Bayati, M H Mohamed, M R Frankel, D C Haussen

345 Endovascular robotic: feasibility and proof of principle for diagnostic cerebral angiography and carotid artery stenting
K C Sajja, A Swad, F Al Saeigh, N Chaloub, M B Avery, R F Schmidt, S T Jpinmamarkis, M R Cooc, N Heres, R Albav, H Zarrour, V Romy, R Rosenwater, P Jhalbro

Ischemic Stroke

350 Mechanical thrombectomy in patients with acute ischemic stroke and ASPECTS ≤6: a meta-analysis
F Caganzo, J Derraz, C Dargazanzial, P-H Lefevre, G Gascou, C Riquelme, A Bonafe, V Costalat

356 National trends in endovascular therapy for acute ischemic stroke: utilization and outcomes
I Stein, S Tuhmim, J Fitj, J Alcoc, M Damoan

374 Peri-procedural stroke or death in stenting of symptomatic severe intracranial stenosis

380 Submaximal angioplasty in the treatment of patients with symptomatic ICAD: a systematic review and meta-analysis
S M Seyedsedaghat, Y U Yokou, A Neuschat, A Rizvi, M Alsabti, M H Murad, W Brinkji, M Bydon, D F Kalms

386 First pass effect with contact aspiration and stent retrievers in the Aspiration versus Stent Retriever (ASTER) trial
C Dureux, M Pein, B Goy, J Labreuche, R Blanc, M Ben Maacha, B Lapergue, R Fahed, for theASTER Trial investigators

392 Blind exchange with mini-pinning technique for distal occlusion thrombectomy
D C Haussen, A R Al-Bayati, B Eby, K Ravindran, G M Rodrigues, M R Frankel, R G Nogueira

396 Direct thromboaspiration efficacy for mechanical thrombectomy is related to the angle of interaction between the aspiration catheter and the clot
C Bernava, A Rosi, J Bao, O Brina, Z Kulcsar, C Czarnecki, E Carrera, K Schaller, K-O Lovblad, P Mach

401 Evaluation of the radiosurgical treatment of cerebral arteriovenous malformations: a retrospective single-center analysis of three decades

370 Emergency medical systems education may improve knowledge of pre-hospital stroke triage protocols

MORE CONTENTS ➤

This article has been chosen by the Editor to be of special interest or importance and is freely available online.

This article has been made freely available online under the BMJ Journals open access scheme. See http://authors.bmj.com/open-access/

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics
http://publicationethics.org/

This article is protected by copyright.
### Contents

#### Hemorrhagic Stroke
407  Diffusion weighted image documented cerebral ischemia in the postprocedural period following pipeline embolization device with shield technology treatment of unruptured intracranial aneurysms: a prospective, single center study  
S Pikis, G Mantziaris, V Mamalis, K Barkas, A Tsanis, S Lyra, K Karkoulias, T Petrosyan, E Archontakis

#### Socioeconomics
422  Outcomes associated with endovascular treatment among patients with acute ischemic stroke in the USA  
A T Rai, C Crivera, E Kotzevmeier, I Kalsekar, R Kumari, N Patino, F Chekzeni, R Khanna

#### Head and Neck
427  Left transradial access for cerebral angiography  
G Barros, D I Bass, J W Osbun, S H Chen, M-C Brunet, E C Peterson, M Walker, C M Kelly, M R Levitt

#### Review
412  A systematic review of non-trunk basilar perforator aneurysms: is it worth chasing the small fish?  
M F Granja, A Monteiro, G J Agnoletto, S Jamal, E Sauvaugéau, A Aghaeibrahim, R Hanel

#### Technical video
436  Transradial embolization of the left middle meningeal artery and accessory middle meningeal artery for treatment of subacute–chronic subdural hematoma  
G B Rajah, M K Tso, R Dossani, K Vakhraria, A H Siddiqui