**Editors column**

**717** Practice makes perfect: establishing reasonable minimum thrombectomy volume requirements for stroke centers

K M Fargen, D J Fiorella, J Mocco

**Commentary**

**720** Patients, not pictures: why complete occlusion may be a complete disaster

D F Kallmes, D Fiorella, W Benigni, C P Derdeyn

**Ischemic stroke**

**722** A population-based incidence of acute large vessel occlusions and thrombectomy eligible patients indicates significant potential for growth of endovascular stroke therapy in the USA

A T Rai, A E Saldan, S Bao, P S Linke, J R Domico, A R Tatarkovich, N Lucke-Wold, J S Carpenter

**727** Endovascular treatment of acute ischemic stroke in nonagenarians compared with younger patients in a multicenter cohort

M A Khan, G L Baird, D Miller, A Patel, S Tsekhman, S Yaghi, A Pur, M Jayaraman, N Henneberg, B Silver

**Mechanical thrombectomy for pediatric acute ischemic stroke: review of the literature**

S Saito, J Chen, T Sivapatham, A M Jayaraman, D Orbach

**738** Factors associated with perforator stroke after selective basilar artery angioplasty or stenting

B Jia, D S Liebeskind, N Ma, F Gao, D Mo, G Luo, X Li, X Gui, G Peng, Z Niao

**732** A comparison of acute vascular damage caused by ADAPT versus a stent retriever device after thrombectomy in acute ischemic stroke: a histological and ultrastructural study in an animal model

S Peschillo, F Diana, J Berge, P Missoni

**750** Long term durability and outcomes of carotid stenting and carotid endarterectomy

J-M Jung, J-Y Choi, H J Kim, S-Suh, W-K Seo

**Homorrhagic stroke**

**756** Is intensive care monitoring necessary after coil embolization of unruptured intracranial aneurysms?

W R Steiner, J Gruszadze, Y Saadeh, T J Wilson, W N Al-Holou, N Chaudhary, B G Thompson, A S Pandey, J J Gemmete

**761** Safety and effectiveness of microsurgical clipping, endovascular coiling, and stent assisted coiling for unruptured anterior communicating artery aneurysms: a systematic analysis of observational studies

A H O’Neill, R V Chandra, L T Lai

**New devices**

**766** Use of a pressure sensing sheath: comparison with standard means of blood pressure monitoring in catheterization procedures

P D Pardy, C South, R P Klauczyn, K C Liu, R L Novakovic, A S Pan, G L Pride, B Agazanian-Kiontz, A Ray, A C Elliott

**772** Periprocedural outcomes and early safety with the use of the Pipeline Flex Embolization Device with Shield Technology for unruptured intracranial aneurysms: preliminary results from a prospective clinical study


**Basic science**

**777** Computational fluid dynamics of cerebral aneurysm coiling using high-resolution and high-energy synchrotron X-ray microtomography: comparison with the homogeneous porous medium approach

M R Levit, M C Barbour, S R du Roscoat, C Gendreau, V K Chivukula, P M McGah, J D Nerva, R P Morton, L J Kim, A Aliseda

**783** Concomitant aneurysm detection in an intracranial dolichoectasia mouse model using a MicroFil polymer perfusion technique

Y-Q Zhu, D-Y Dai, H-X Xing, Y-H Ding, R Kadivel, D F Kallmes
## Contents

### Tumor embolization

787 3D-guided direct puncture therapeutic embolization of intracranial tumors

J Caroff, N Benachour, I Ibra, J Neveux, F Parker, V Da Ros, C Mihalea, M Iacobucci, J Moret, L Spelle

### Clinical neurology

792 Efficacy of a two-test protocol for achieving a therapeutic response to clopidogrel prior to elective endovascular intracranial aneurysm treatment and an induced postoperative hyper-response

Y Kayan, J E Delgado Almandoz, J L Fease, A M Milner, J J Scholz, M Mulder

### Spine

797 Retrospective review of percutaneous synovial cyst ruptures: increased thickness of the T2 hypointense rim on post-rupture MRI may be associated with need for subsequent surgery

B Y M Kwan, F Salehi, S Jia, S McGregor, N Duggal, D Pelz, M Mulder

### Standards

801 Prehospital care delivery and triage of stroke with emergent large vessel occlusion (ELVO): report of the Standards and Guidelines Committee of the Society of Neurointerventional Surgery


### Electronic pages

- **e29** Endovascular interventions for acute stroke: past practice and current research
  - J Raymond, J Ghostine, N Khoury, D Roy, T E Darsaut

- **e30** Basilar stroke from a persistent hypoglossal artery
  - A P See, J F Baranoski, B C Flores, A Ducnet, F C Albuquerque

- **e31** Intercostal artery pseudoaneurysm with spontaneous resolution in the setting of an artery of Adamkiewicz
  - A Agarwal, Y Weerakkody, M Marshall, T Singh

- **e32** Novel approach for independent control of brain hypothermia and systemic normothermia: cerebral selective deep hypothermia for refractory cardiac arrest
  - C-H Wang, Y-T Lin, H-W Chou, Y-C Wang, J J Hwang, J R Gilbert, Y-S Chen

- **e33** Stentriever thrombectomy with distal protection device for carotid free floating thrombus: a technical case report
  - S Giragani, A Balani, V Agrawal