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CAROTID DISEASE

- 479 **Editor's Choice – Overview of Primary and Secondary Analyses From 20 Randomised Controlled Trials Comparing Carotid Artery Stenting With Carotid Endarterectomy**
A.J. Batchelder, A. Saratzis and A. Ross Naylor
- Compared with CEA, the 30 day death/stroke rate is higher after CAS in seven RCTs including 3467 asymptomatic patients and in 10 RCTs including 5797 symptomatic patients, while the risk of ipsilateral stroke is similar after 30 days. Numerous key issues, such as impact of new stent technologies and improved cerebral protection and optimal volume of CAS procedures, remain unsolved.
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- 494 **Carotid Stenting versus Endarterectomy: The Evidence is Evident. Or is it?**
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L.S. Kuhrij, A.J.A. Meershoek, E.G. Karthaus, A.C. Vahl, J.F. Hamming, P.J. Nederkoorn and G.J. de Borst
- In this large cohort (n = 8620), the median time to CEA is 11 days (IQR 8-14) while factors associated with a hospital dependent waiting time >14 days are age, previous CEA, ocular symptoms as index event, and indirect referral.
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- 502 **Are Delays to Perform Carotid Endarterectomy in Symptomatic Stenosis Inevitable for Some Patients?**
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AORTIC DISEASE

- 503 **Editor's Choice – Sex Specific Differences in the Management of Descending Thoracic Aortic Aneurysms: Systematic Review with Meta-Analysis**
P. Ulug, J.T. Powell, R. Warschkow and R.S. von Allmen
- This meta-analysis, encompassing six studies and 4375 patients (1756 women), reports that 30 day mortality after TEVAR for DTAA is almost twice as high in women as in men, and women have a slightly longer hospital stay. For open repair, there are insufficient recent data to analyse sex specific differences in outcomes.
- 512 **Incidence and Predictors of Neurological Complications Following Thoracic Endovascular Aneurysm Repair in the Global Registry for Endovascular Aortic Treatment**
M. Piazza, F. Squizzato, L. Milan, T. Miccoli, F. Grego and M. Antonello on behalf of the Global Registry for Endovascular Aortic Treatment (GREAT) investigators
- In this large registry (n = 833), the incidence of CVA and of spinal cord ischaemia (SCI) at 30 day is 1.5% and 1.8%, respectively, while four year freedom from CVA and from SCI is 96.3% and 97.8%, respectively. Aortic arch aneurysms are associated with increased peri-operative CVA risk while length of aortic coverage is a predictor of mid term SCI.

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- 520 **Predictors of Neurological Complications After Transthoracic Endovascular Aneurysm Repair: More Questions than Answers**

J.D. Kakisis

- 521 **Immediate Impact of Prosthetic Graft Replacement of the Ascending Aorta on Circumferential Strain in the Descending Aorta**

L.Q. Rong, M.C. Palumbo, M. Rahouma, M. Meineri, G.R. Arguelles, J. Kim, C. Lau, R.B. Devereux, K.O. Pryor, L.N. Girardi, A. Redaelli, M.F.L. Gaudino and J.W. Weinsaft

Prosthetic graft replacement (n = 45) of the ascending aorta increases immediate circumferential strain of the descending aorta, particularly in patients with cystic medial necrosis. The augmentation of energy transfer to the distal aorta is a potential mechanism for progressive aortic dilatation or dissection.

- 529 **Comparison of Early and Late Post-operative Outcomes after Supra-inguinal Bypass for Aortoiliac Occlusive Disease**

Z.M. Saadeddin, D.V. Rybin, G. Doros, J.J. Siracuse, A. Farber and M.H. Eslami

This large registry study (n = 1602) shows that femorofemoral bypass (FFB) is associated with lower rates of post-operative complications than axillofemoral bypass, while one year limb salvage and long term survival rates after FFB are similar to those after aortofemoral bypass.

- 538 **Endograft Specific Haemodynamics After Endovascular Aneurysm Repair: Flow Characteristics of Four Stent Graft Systems**

A. Raptis, M. Xenos, K. Spanos, G. Kouvelos, A. Giannoukas and M. Matsagkas

Using computational fluid dynamics to analyse blood variability among four stent graft systems, this study (n = 32) aims at providing data to increase the level of endovascular treatment personalisation and to improve endograft design.

PERIPHERAL ARTERIAL DISEASE

- 548 **Additional Risk Stratification Using Local and Systemic Factors for Patients with Critical Limb Ischaemia Undergoing Endovascular Therapy in the Wifl Era**

Y. Hata, O. Iida, S. Okamoto, T. Ishihara, K. Nanto, T. Tsujumura, M. Takahara and T. Mano

This study (n = 735) reports that non ambulatory status, haemodialysis, and an albumin level < 3.0 g/dL are additional risk factors for impaired wound healing in CLTI patients with Wifl stage 4. In Wifl stage 1-3 patients, no systemic risk factors are associated with wound healing.

- 556 **The Small Saphenous Vein: An Underestimated Source for Autologous Distal Vein Bypass**

P. Nierlich, P. Metzger, F.K. Enzmann, M. Aspalter, W. Dabernig, W. Hitzl, K. Linni and T. Hölzenbein

In this study (n = 118; median follow up = 30.5 months), primary patency, secondary patency, limb salvage, and survival are 54%, 77%, 78%, and 91%, respectively, at 5 years after distal bypass using the small saphenous vein.

- 564 **Heterogeneity in Standard Operating Procedures for Catheter Directed Thrombolysis for Peripheral Arterial Occlusions in The Netherlands: A Nationwide Overview**

B.S. Leenstra, D.-J. van Ginkel, C.E.V.B. Hazenberg, E.-J.P.A. Vonken and G.J. de Borst

The standard operating procedures (SOPs) for catheter directed thrombolysis for acute arterial occlusions of the lower extremities differ significantly on numerous aspects among medical centers in the Netherlands. None of the SOPs exactly conforms to international or national guidelines.

VENOUS DISEASE

- 570 **Significance of Partial or Complete Thrombosis of the Common and Deep Femoral Vein in Patients With Deep Vein Thrombosis**

R. Broholm, N. Bækgaard, S. Hansen, C. Strandberg, C. Kinnander, C. Hædersdal and H. Sillesen

This study (n = 200) underlines the importance of a thorough ultrasound examination in patients suspected of having DVT, including examination of the profunda femoris vein. An occlusive thrombus in the profunda femoris vein should raise the suspicion of thrombus in the iliac veins.

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BASIC SCIENCE AND TRANSLATIONAL MEDICINE

- 576 **Critical Limb Ischaemia Exacerbates Mitochondrial Dysfunction in ApoE^{-/-} Mice Compared with ApoE^{+/+} Mice, but N-acetyl Cysteine still Confers Protection**

A. Lejay, A.-L. Charles, I. Georg, F. Goupilleau, C. Delay, S. Talha, F. Thaveau, N. Chakfé and B. Geny

This study (n = 18 mice) shows that CLI exacerbates mitochondrial dysfunction and that antioxidant therapies, such as N-acetyl cysteine, confer protection. Oxidative stress should be further investigated as a potential target for protective strategies in CLI patients.

- 583 **Photodynamic Therapy Versus Glucose for the Treatment of Telangiectasia: A Randomised Controlled Study in a Rabbit Ear Model**

H.H. Buzzá, D. Holmo Jr, M.D. Stringasci, M. Bertanha, P.d.S. Leão, A.T. Fabro, N.F. Silva Jr, A.C. Zangirolami, V.S. Bagnato and W.B. Yoshida

In rabbits (n = 18), photodynamic therapy of telangiectasia reduces the treated vein length and area temperature without causing severe histological damage, such as necrosis or ulceration.

VASCULAR (GRAFT) INFECTION

- 592 ***In situ* Reconstruction of Infected Groin Pseudoaneurysms in Drug Abusers With Biological Grafts**

D. Becker, M. Béguin, S. Weiss, T.R. Wyss, J. Schmidli and V. Makaloski

This study (n = 22) shows that *in situ* reconstruction with biological grafts of infected pseudoaneurysms in drug abusers can be successfully performed, but the surgical procedures are complex and the incidence of long term re-infection, graft occlusion or stenosis is high.

Invited commentary

- 599 **Mycotic Pseudoaneurysms in Drug Abusers: Still Looking for the Best Weapon for an Old Enemy**

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C.I. Nesbitt, S.J. Tingle, R. Williams, J.E. McCaslin, R. Searle, S. Mafeld and G.P. Stansby

This study, conducted among 24 endovascular novices, reports that pulsatile human cadaver model training has a longer learning curve, with gradual improvement, reflecting the enhanced difficulty of a more realistic model.

MISCELLANEOUS

- 609 **International Validation of the Danish Vascular Registry Karbase: A Vascunet Report**

M. Altreuther and G. Menyhei

Using the Vascunet template for international validation of registry data, this study demonstrates that Karbase is a reliable system of quality data collection for Danish vascular surgery, with excellent internal and external validity for carotid and aortic procedures.

Invited commentary

- 614 **No Complaints on the Validity of Karbase**

M. Venermo

- 615 **Factors in ProGlide[®] Vascular Closure Failure in Sheath Arteriotomies Greater than 16 French**

I.-M. Chen, T.-H. Lee, P.-L. Chen, C.-C. Shih and H.-H. Chang

This study (458 patients; 602 common femoral artery (CFA) endovascular access sites) reports that history of PAD, presence of CFA calcification, BMI, depth of the skin puncture site, and sheath size are associated with ProGlide[®] failure.

Invited commentary

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