CLNEG054: Neuroimaging and Pathophysiology

View Online

A. W. Cowley (1992) 'Long-term control of arterial blood pressure', Physiological Reviews, 72(1), pp. 231–300. Available at: http://physrev.physiology.org/content/72/1/231.

Abbott, N.J. et al. (2010) 'Structure and function of the blood–brain barrier', Neurobiology of Disease, 37(1), pp. 13–25. Available at: https://doi.org/10.1016/j.nbd.2009.07.030.

Altaf, N. et al. (2007) 'Carotid Intraplaque Hemorrhage Predicts Recurrent Symptoms in Patients With High-Grade Carotid Stenosis', Stroke, 38(5), pp. 1633–1635. Available at: https://doi.org/10.1161/STROKEAHA.106.473066.

Altaf, N. et al. (2011) 'Plaque Hemorrhage Is a Marker of Thromboembolic Activity in Patients with Symptomatic Carotid Disease', Radiology, 258(2), pp. 538–545. Available at: https://doi.org/10.1148/radiol.10100198.

Anderson, C.S. et al. (2013) 'Rapid Blood-Pressure Lowering in Patients with Acute Intracerebral Hemorrhage', New England Journal of Medicine, 368(25), pp. 2355–2365. Available at: https://doi.org/10.1056/NEJMoa1214609.

Astrup, J. et al. (1977) 'Cortical evoked potential and extracellular K+ and H+ at critical levels of brain ischemia', Stroke, 8(1), pp. 51–57. Available at: https://doi.org/10.1161/01.STR.8.1.51.

'Atrial fibrillation: the management of atrial fibrillation | Guidance and guidelines | NICE' (no date). Available at: https://www.nice.org.uk/guidance/cg180.

Attwell, D. et al. (2010) 'Glial and neuronal control of brain blood flow', Nature, 468(7321), pp. 232–243. Available at: https://doi.org/10.1038/nature09613.

Barker, P.B., Golay, X. and Zaharchuk, G. (2013) Clinical perfusion MRI techniques and applications. Cambridge: Cambridge University Press.

Bohman, L.-E. and Levine, J.M. (2014) 'Fever and therapeutic normothermia in severe brain injury', Current Opinion in Critical Care, 20(2), pp. 182–188. Available at: https://doi.org/10.1097/MCC.0000000000000070.

Bridges, L.R. et al. (2014) 'Blood-Brain Barrier Dysfunction and Cerebral Small Vessel Disease (Arteriolosclerosis) in Brains of Older People', Journal of Neuropathology & Experimental Neurology, 73(11), pp. 1026–1033. Available at: https://doi.org/10.1097/NEN.0000000000000124.

Chatzizisis, Y.S. et al. (2007) 'Role of Endothelial Shear Stress in the Natural History of

Coronary Atherosclerosis and Vascular Remodeling', Journal of the American College of Cardiology, 49(25), pp. 2379–2393. Available at: https://doi.org/10.1016/j.jacc.2007.02.059.

Clarkson, A.N. et al. (2010) 'Reducing excessive GABA-mediated tonic inhibition promotes functional recovery after stroke', Nature, 468(7321), pp. 305–309. Available at: https://doi.org/10.1038/nature09511.

Coupar, F. et al. (2012) 'Predictors of upper limb recovery after stroke: a systematic review and meta-analysis', Clinical Rehabilitation, 26(4), pp. 291–313. Available at: https://doi.org/10.1177/0269215511420305.

Culmsee, C. and Krieglstein, J. (2007) 'Ischaemic brain damage after stroke: new insights into efficient therapeutic strategies. International Symposium on Neurodegeneration and Neuroprotection', EMBO reports, 8(2), pp. 129–133. Available at: https://doi.org/10.1038/sj.embor.7400892.

Delcourt, C. and Anderson, C. (2012) 'Acute intracerebral haemorrhage: Grounds for optimism in management', Journal of Clinical Neuroscience, 19(12), pp. 1622–1626. Available at: https://doi.org/10.1016/j.jocn.2012.05.018.

Ferro, J.M. (2003) 'Cardioembolic stroke: an update', The Lancet Neurology, 2(3), pp. 177–188. Available at: https://doi.org/10.1016/S1474-4422(03)00324-7.

Fisch, A. (2012) Neuroanatomy: draw it to know it. 2nd ed. New York: Oxford University Press. Available at: http://dx.doi.org/10.1093/med/9780199845712.001.0001.

Flower, Oliver (no date) 'The acute management of intracerebral hemorrhage', Current Opinion in Critical Care, 17(2). Available at: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&AN=00075198-201104000-00005&LSLINK=80&D=ovft.

Furlan, M. et al. (1996) 'Spontaneous neurological recovery after stroke and the fate of the ischemic penumbra', Annals of Neurology, 40(2), pp. 216–226. Available at: https://doi.org/10.1002/ana.410400213.

Ginsberg, M.D. (2003) 'Adventures in the Pathophysiology of Brain Ischemia: Penumbra, Gene Expression, Neuroprotection: The 2002 Thomas Willis Lecture', Stroke, 34(1), pp. 214–223. Available at: https://doi.org/10.1161/01.STR.0000048846.09677.62.

Gioia, Laura C.a (no date) 'Blood pressure management in acute intracerebral hemorrhage: current evidence and ongoing controversies', Current Opinion in Critical Care , 21(2). Available at: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&AN=00075198-201504000-00003&LSLINK=80&D=ovft.

Gouw, A.A. et al. (2011) 'Heterogeneity of small vessel disease: a systematic review of MRI and histopathology correlations', Journal of Neurology, Neurosurgery & Psychiatry, 82(2), pp. 126–135. Available at: https://doi.org/10.1136/jnnp.2009.204685.

Grise, Erin M. (no date) 'Blood pressure control for acute ischemic and hemorrhagic stroke', Current Opinion in Critical Care, 18(2). Available at:

http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&AN=00075198-201204000-00005&LSLINK=80&D=ovft.

Grotta, J.C. et al. (2015) Stroke: Pathophysiology, Diagnosis, and Management [electronic resource]. 6th ed. London: Elsevier Health Sciences. Available at: http://www.sciencedirect.com/science/book/9780323295444.

Grupke, S. et al. (2015) 'Understanding history, and not repeating it. Neuroprotection for acute ischemic stroke: From review to preview', Clinical Neurology and Neurosurgery, 129, pp. 1–9. Available at: https://doi.org/10.1016/j.clineuro.2014.11.013.

'Guidelines for Management of Ischaemic Stroke and Transient Ischaemic Attack 2008' (2008) Cerebrovascular Diseases, 25(5), pp. 457–507. Available at: https://doi.org/10.1159/000131083.

Gupta, A. et al. (2013) 'Carotid Plaque MRI and Stroke Risk: A Systematic Review and Meta-analysis', Stroke, 44(11), pp. 3071–3077. Available at: https://doi.org/10.1161/STROKEAHA.113.002551.

Habs, M. et al. (2011) 'Age determination of vessel wall hematoma in spontaneous cervical artery dissection: A multi-sequence 3T Cardiovascular Magnetic resonance study', Journal of Cardiovascular Magnetic Resonance, 13(1). Available at: https://doi.org/10.1186/1532-429X-13-76.

Hall, C.N. et al. (2014) 'Capillary pericytes regulate cerebral blood flow in health and disease', Nature, 508(7494), pp. 55–60. Available at: https://doi.org/10.1038/nature13165.

Hall, S.D. et al. (2011) 'The role of GABAergic modulation in motor function related neuronal network activity', NeuroImage, 56(3), pp. 1506–1510. Available at: https://doi.org/10.1016/j.neuroimage.2011.02.025.

Harris, J.J., Jolivet, R. and Attwell, D. (2012) 'Synaptic Energy Use and Supply', Neuron, 75(5), pp. 762–777. Available at: https://doi.org/10.1016/j.neuron.2012.08.019.

Hart, R.G. et al. (2014) 'Embolic strokes of undetermined source: the case for a new clinical construct', The Lancet Neurology, 13(4), pp. 429–438. Available at: https://doi.org/10.1016/S1474-4422(13)70310-7.

Hemphill, J.C. et al. (2015a) 'Guidelines for the Management of Spontaneous Intracerebral Hemorrhage', Stroke, 46(7), pp. 2032–2060. Available at: https://doi.org/10.1161/STR.0000000000000069.

Hemphill, J.C. et al. (2015b) 'Guidelines for the Management of Spontaneous Intracerebral Hemorrhage', Stroke, 46(7), pp. 2032–2060. Available at: https://doi.org/10.1161/STR.0000000000000069.

Homma, S. (2005) 'Patent Foramen Ovale and Stroke', Circulation, 112(7), pp. 1063–1072. Available at: https://doi.org/10.1161/CIRCULATIONAHA.104.524371.

Hope, T.M.H. et al. (2013) 'Predicting outcome and recovery after stroke with lesions extracted from MRI images', NeuroImage: Clinical, 2, pp. 424–433. Available at:

https://doi.org/10.1016/j.nicl.2013.03.005.

Hougaard, K.D. et al. (2014) 'Remote Ischemic Perconditioning as an Adjunct Therapy to Thrombolysis in Patients With Acute Ischemic Stroke: A Randomized Trial', Stroke, 45(1), pp. 159–167. Available at: https://doi.org/10.1161/STROKEAHA.113.001346.

Jauch, E.C. et al. (2013) 'Guidelines for the Early Management of Patients With Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association', Stroke, 44(3), pp. 870–947. Available at: https://doi.org/10.1161/STR.0b013e318284056a.

Jones, D.K. (2011) Diffusion MRI: theory, methods, and applications. New York: Oxford University Press.

Kalanuria, Atul A.a , b (no date) 'Early prognostication in acute brain damage: where is the evidence?', Current Opinion in Critical Care, 19(2). Available at: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&AN=00075198-201304000-00008&LSLINK=80&D=ovft.

Kirkman, M.A., Citerio, G. and Smith, M. (2014) 'The intensive care management of acute ischemic stroke: an overview', Intensive Care Medicine, 40(5), pp. 640–653. Available at: https://doi.org/10.1007/s00134-014-3266-z.

Kirkman, Matthew A. MBBS*,† (no date) 'Supratentorial Intracerebral Hemorrhage: A Review of the Underlying Pathophysiology and its Relevance for Multimodality Neuromonitoring in Neurointensive Care', Journal of Neurosurgical Anesthesiology, 25(3), pp. 228–239. Available at: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&AN=00008506-201307000-00002&LSLINK=80&D=ovft.

Krakauer, J. and Marshall, R. (2015) 'The proportional recovery rule for stroke revisited', Annals of Neurology, p. n/a-n/a. Available at: https://doi.org/10.1002/ana.24537.

Krakauer, J.W. et al. (2012) 'Getting Neurorehabilitation Right: What Can Be Learned From Animal Models?', Neurorehabilitation and Neural Repair, 26(8), pp. 923–931. Available at: https://doi.org/10.1177/1545968312440745.

Lees, K.R. (1998) 'Does neuroprotection improve stroke outcome?', The Lancet, 351(9114), pp. 1447–1448. Available at: https://doi.org/10.1016/S0140-6736(05)78865-6.

Libby, P. (2002) 'Inflammation in atherosclerosis', Nature, 420(6917), pp. 868–874. Available at: https://doi.org/10.1038/nature01323.

Liu, J.Y.W. et al. (2012) 'Neuropathology of the blood-brain barrier and pharmaco-resistance in human epilepsy', Brain, 135(10), pp. 3115–3133. Available at: https://doi.org/10.1093/brain/aws147.

Lo, E.H. (2008) 'A new penumbra: transitioning from injury into repair after stroke', Nature Medicine, 14(5), pp. 497–500. Available at: https://doi.org/10.1038/nm1735.

Lo, E.H., Dalkara, T. and Moskowitz, M.A. (2003) 'Neurological diseases: Mechanisms,

challenges and opportunities in stroke', Nature Reviews Neuroscience, 4(5), pp. 399–414. Available at: https://doi.org/10.1038/nrn1106.

Lok, J. et al. (2007) 'Cell–cell Signaling in the Neurovascular Unit', Neurochemical Research , 32(12), pp. 2032–2045. Available at: https://doi.org/10.1007/s11064-007-9342-9.

Malek, A.M. (1999) 'Hemodynamic Shear Stress and Its Role in Atherosclerosis', JAMA, 282(21). Available at: https://doi.org/10.1001/jama.282.21.2035.

Murphy, T.H. and Corbett, D. (2009) 'Plasticity during stroke recovery: from synapse to behaviour', Nature Reviews Neuroscience, 10(12), pp. 861–872. Available at: https://doi.org/10.1038/nrn2735.

Oeinck, M. et al. (2013) 'Dynamic Cerebral Autoregulation in Acute Intracerebral Hemorrhage', Stroke, 44(10), pp. 2722–2728. Available at: https://doi.org/10.1161/STROKEAHA.113.001913.

Pantoni, L. (2010) 'Cerebral small vessel disease: from pathogenesis and clinical characteristics to therapeutic challenges', The Lancet Neurology, 9(7), pp. 689–701. Available at: https://doi.org/10.1016/S1474-4422(10)70104-6.

Pantoni, L. and Gorelick, P.B. (eds) (2014) Cerebral small vessel disease. Cambridge: Cambridge University Press. Available at: http://dx.doi.org/10.1017/CBO9781139382694.
Ramos-Cabrer, P. et al. (2011) 'Targeting the Ischemic Penumbra', Stroke, 42(1, Supplement 1), pp. S7–S11. Available at: https://doi.org/10.1161/STROKEAHA.110.596684.

Rose, J.C. and Mayer, S.A. (2004) 'Optimizing Blood Pressure in Neurological Emergencies', Neurocritical Care, 1(3), pp. 287–300. Available at: https://doi.org/10.1385/NCC:1:3:287.

Sharp, F.R. et al. (2000a) 'Multiple Molecular Penumbras After Focal Cerebral Ischemia', Journal of Cerebral Blood Flow and Metabolism, pp. 1011–1032. Available at: https://doi.org/10.1097/00004647-200007000-00001.

Sharp, F.R. et al. (2000b) 'Multiple Molecular Penumbras After Focal Cerebral Ischemia', Journal of Cerebral Blood Flow and Metabolism, pp. 1011–1032. Available at: https://doi.org/10.1097/00004647-200007000-00001.

Smith, Martin MBBS, FRCA (no date) 'Monitoring Intracranial Pressure in Traumatic Brain Injury', Anesthesia & Analgesia, 106(1), pp. 240–248. Available at: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&AN=00000539-200801000-00042&LSLINK=80&D=ovft.

Sposato, L.A. et al. (2015) 'Very short paroxysms account for more than half of the cases of atrial fibrillation detected after stroke and TIA: a systematic review and meta-analysis', International Journal of Stroke, 10(6), pp. 801–807. Available at: https://doi.org/10.1111/ijs.12555.

Staessen, J.A. et al. (2003) 'Essential hypertension', The Lancet, 361(9369), pp. 1629–1641. Available at: https://doi.org/10.1016/S0140-6736(03)13302-8.

Stary, H.C. et al. (1995) 'A Definition of Advanced Types of Atherosclerotic Lesions and a

Histological Classification of Atherosclerosis : A Report From the Committee on Vascular Lesions of the Council on Arteriosclerosis, American Heart Association', Circulation, 92(5), pp. 1355–1374. Available at: https://doi.org/10.1161/01.CIR.92.5.1355.

Stinear, C.M. et al. (2012) 'The PREP algorithm predicts potential for upper limb recovery after stroke', Brain, 135(8), pp. 2527–2535. Available at: https://doi.org/10.1093/brain/aws146.

T A Yousry (1997) 'Localization of the motor hand area to a knob on the precentral gyrus. A new landmark.', Brain, 120(1), pp. 141–157. Available at: http://brain.oxfordjournals.org/content/120/1/141.

T P Obrenovitch (1995) 'The ischaemic penumbra: Twenty years on', Cerebrovascular and brain metabolism reviews, 7(4).

Taheri, S. et al. (2011) 'Blood-Brain Barrier Permeability Abnormalities in Vascular Cognitive Impairment', Stroke, 42(8), pp. 2158–2163. Available at: https://doi.org/10.1161/STROKEAHA.110.611731.

Virmani, R. et al. (2000) 'Lessons From Sudden Coronary Death : A Comprehensive Morphological Classification Scheme for Atherosclerotic Lesions', Arteriosclerosis, Thrombosis, and Vascular Biology, 20(5), pp. 1262–1275. Available at: https://doi.org/10.1161/01.ATV.20.5.1262.

Wakili, R. et al. (2011) 'Recent advances in the molecular pathophysiology of atrial fibrillation', Journal of Clinical Investigation, 121(8), pp. 2955–2968. Available at: https://doi.org/10.1172/JCI46315.

Wang, Y. et al. (2015) 'Ischemic conditioning-induced endogenous brain protection: Applications pre-, per- or post-stroke', Experimental Neurology [Preprint]. Available at: https://doi.org/10.1016/j.expneurol.2015.04.009.

Ward, N.S. (2015a) 'Does neuroimaging help to deliver better recovery of movement after stroke?', Current Opinion in Neurology, 28(4), pp. 323–329. Available at: https://doi.org/10.1097/WCO.0000000000000223.

Ward, N.S. (2015b) 'Using oscillations to understand recovery after stroke', Brain, 138(10), pp. 2811–2813. Available at: https://doi.org/10.1093/brain/awv265.

Wardlaw, J.M. et al. (2003) 'Is Breakdown of the Blood-Brain Barrier Responsible for Lacunar Stroke, Leukoaraiosis, and Dementia?', Stroke, 34(3), pp. 806–812. Available at: https://doi.org/10.1161/01.STR.0000058480.77236.B3.

Wartenberg, Katja E. (no date) 'Malignant middle cerebral artery infarction', Current Opinion in Critical Care, 18(2). Available at: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&AN=00075198-201204000-00008&LSLINK=80&D=ovft.

Wilson, D. et al. (2015) 'Investigating intracerebral haemorrhage', BMJ, 350(may20 10), pp. h2484–h2484. Available at: https://doi.org/10.1136/bmj.h2484.

Wilson, D., Charidimou, A. and Werring, D.J. (2014) 'Advances in understanding

spontaneous intracerebral hemorrhage: insights from neuroimaging', Expert Review of Neurotherapeutics, 14(6), pp. 661–678. Available at: https://doi.org/10.1586/14737175.2014.918506.

Wolf, P.A., Abbott, R.D. and Kannel, W.B. (1991) 'Atrial fibrillation as an independent risk factor for stroke: the Framingham Study', Stroke, 22(8), pp. 983–988. Available at: https://doi.org/10.1161/01.STR.22.8.983.

Yuan, C. et al. (2006) 'MRI of atherosclerosis in clinical trials', NMR in Biomedicine, 19(6), pp. 636–654. Available at: https://doi.org/10.1002/nbm.1065.

Zeiler, S.R. and Krakauer, J.W. (2013) 'The interaction between training and plasticity in the poststroke brain', Current Opinion in Neurology, 26(6), pp. 609–616. Available at: https://doi.org/10.1097/WCO.0000000000000025.

Zhao, Z. et al. (2015) 'Central role for PICALM in amyloid-β blood-brain barrier transcytosis and clearance', Nature Neuroscience, 18(7), pp. 978–987. Available at: https://doi.org/10.1038/nn.4025.

Zlokovic, B.V. (2008) 'The Blood-Brain Barrier in Health and Chronic Neurodegenerative Disorders', Neuron, 57(2), pp. 178–201. Available at: https://doi.org/10.1016/j.neuron.2008.01.003.

Zlokovic, B.V. (2013) 'Cerebrovascular Effects of Apolipoprotein E', JAMA Neurology, 70(4). Available at: https://doi.org/10.1001/jamaneurol.2013.2152.

del Zoppo, G.J. and Hallenbeck, J.M. (2000) 'Advances in the Vascular Pathophysiology of Ischemic Stroke', Thrombosis Research, 98(3), pp. 73–81. Available at: https://doi.org/10.1016/S0049-3848(00)00218-8.