Volume 21: Issue 7 March 31, 2020

NEUROSURGE

MONTHLY UPDATES FROM THE CHAIRMAN'S OFFICE UNIVERSITY OF TORONTO, DIVISION OF NEUROSURGERY

In This Issue:
From the Chairman's Office
Honors, Grants and Awards
Publications
Visiting Professorships
In the Media
PDF of the Month
Upcoming Meetings
Residents' Corner

FROM THE CHAIRMAN'S OFFICE

COVID-19

We send out this month's Neurosurge in the midst of unprecedented challenging circumstances. It is no longer business as usual. Our neurosurgical practices are restricted to emergencies, we have learned how to see patients and work remotely, and we may need to be redeployed to cover patient needs—all in an environment of perhaps limiting resources. The response of our faculty city-wide and of our residents and fellows has been tremendous as we prepare for the increasing challenges to come. The residents and fellows have organized their schedules to maximize the benefits to patients and reduce the exposure to the risks of COVID. Each faculty has volunteered and been given privileges at each of our main teaching hospitals should neurosurgeons be out of commission at any one site and the need to help become important. It has been heartwarming and inspirational to see the response and the solidarity as we prepare for what is to come. It is likely that things will worsen before they get better—but get better they will. I would like to remind you of the old adage "Never waste a good crisis". With some of us working at home, it may be a good opportunity to take on a project or reach a goal that would not otherwise be possible. We will learn a tremendous amount from navigating our current circumstances, and it is likely that life will never be the same. I think there is an opportunity to learn to grow and be stronger as a consequence. I would like to thank each and every member of our Division for their efforts as we face the growing COVID-19 pandemic. Our unity and determination will allow us to come through this unprecedented time. Thank you for your unwavering commitment to our Division, and I wish each of you and your families continued safety and good health.

⁻ Andres Lozano, Dan Family Chairman of Neurosurgery, University of Toronto

In Memoriam: Robin Paul Humphreys 1937-2020

We are very saddened to announce the passing of Robin Humphreys on March 18, 2020. Robin was Professor of Neurosurgery at the University of Toronto and Chief of Pediatric Neurosurgery at the Hospital for Sick Children from 1996 until his retirement in 2003. He was a titan of pediatric neurosurgery, and held the positions of President of the American Society of Pediatric Neurosurgery (1992-93) and the International Society of Pediatric Neurosurgery (1993-94) during the prime of his career. Following his retirement, he was a board member of the Hospital for Sick Children Foundation and he carried on his work for his beloved SickKids for an additional 5 years. Robin was a skilled surgeon, an astute clinician, a great teacher, and a beloved mentor and friend to many. He was a superb public speaker and a disciplined administrator. He was a model of professionalism in our specialty. He warmly welcomed many visitors and trainees to SickKids and he and his wife Judith often so generously extended



that welcome to their home in Toronto. Many of us will remember the grace and skill he had to introduce speakers and to pay tributes to others, always seeing people in the best possible light. He imparted to many trainees an infectious enthusiasm for neurosurgery and inspired everyone to be a little better in all aspects of being a surgeon. Many of us close to him in neurosurgery, particularly his many residents and fellows, will remember what a dedicated teacher he was, deeply knowledgeable and offering up organized approaches to the many challenging problems in our discipline. Robin loved to laugh, and he and Judith made you feel special when you were in their company. Robin lost his beloved Judith in January 2020, so they were not apart for long, as it was meant to be. Robin and Judith lived the compassion and dignity to which we all can aspire. Robin adored his family and he will be deeply missed by his children Cameron and Jane, their spouses, and their five grandchildren, as well as many friends. Robin will be missed but his legacy is carried out by many in their daily work across the globe, and he will be fondly remembered.

- Peter Dirks, James Drake, James Rutka, Abhaya Kulkarni, Michael Taylor, George Ibrahim, and Doug Cochrane Toronto and Vancouver, Canada

HONORS, GRANTS AND AWARDS

Associate Chief, Education for Perioperative Services



Abhaya Kulkarni has been named Associate Chief, Education for Perioperative Services at the Hospital for Sick Children. Since 2010, he has served as Residency Program Director for our University Division. His new role will focus on teaching and education as a strategic priority throughout Perioperative Services. Congratulations, Abhaya, on this recognition of your outstanding leadership in education.



Allan Martin (Spine Clinical Fellow, Toronto Western Hospital) received the Charles Kuntz Award AANS/CNS Section on Disorders of the Spine and Peripheral Nerves.



Jetan Badhiwala (PGY4; supervisor: Dr. Michael Fehlings) received the Journalistic and Neurosurgical Excellence (J.A.N.E.) Award at the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves.

PUBLICATIONS

Almeida JP, Radovanovic I. Commentary: Transpalpebral Approach "Eyelid Incision" for Surgical Treatment of Intracerebral Aneurysms: Lessons Learned during a 10-year Experience. Oper Neurosurg (Hagerstown). 2020 Mar 1;18(3):E66-E67.

Altamentova S, Rumajogee P, Hong J, Beldick SR, Park SJ, Yee A, Fehlings MG. Methylprednisolone Reduces Persistent Post-ischemic Inflammation in a Rat Hypoxia-Ischemia Model of Perinatal Stroke. Transl Stroke Res. 2020 Mar 5.

Bhatia KD, Kortman H, Lee H, Waelchli T, Radovanovic I, Schaafsma JD, Pereira VM, Krings T. Facial Nerve Arterial Arcade Supply in Dural Arteriovenous Fistulas: Anatomy and Treatment Strategies. AJNR Am J Neuroradiol. 2020 Mar 19.

Chandravadia N, Liang D, Schjetnan AGP, Carlson A, Faraut M, Chung JM, Reed CM, Dichter B, Maoz U, Kalia SK, Valiante TA, Mamelak AN, Rutishauser U. A NWB-based dataset and processing pipeline of human single-neuron activity during a declarative memory task. Sci Data. 2020 Mar 4;7(1):78.

Charalampidis A, Fehlings MG. Commentary: Reliability of the New AOSpine Classification System for Upper Cervical Traumatic Injuries. Neurosurgery. 2020 Mar 1;86(3):E271-E272.

Diestro JDB, Omar AT, Sarmiento RJC, et al. Cost of hospitalization for stroke in a low middle-income country: Findings from a public tertiary hospital in the Philippines. Int J Stroke. February 2020:174749302090687.

Diestro JDB, Parra-Farinas C, Zetchi MA, Spears J, Marotta TR. The POP (Pull on Pipe) Maneuver: A Technical Note for Rescuing a Prolapsed Pipeline Device. J Stroke Cerebrovasc Dis. January 2020:104647.

Dmytriw AA, Alrashed A, Yang VXD. Posterior fossa dural arteriovenous fistula. CMAJ. 2020 Mar 2;192(9):E207.

Dmytriw AA, Alrashed A, Enriquez-Marulanda A, Daghighi S, Waggas G, Rezaie A, Heyn C, Yu A, Aviv RI, Da Costa L, Yang VX. Qualitative Posttreatment Diffusion-Weighted Imaging as a Predictor of 90-day Outcome in Stroke Intervention. Can J Neurol Sci. 2020 Mar;47(2):160-166.

El-Sehemy A, Selvadurai HJ, Ortin-Martinez A, Pokrajac NT, Mamatjan Y, Tachibana N, Rowland KJ, Lee L, Park NI, Aldape KD, Dirks P, Wallace VA. Norrin mediates tumor-promoting and -suppressive effects in glioblastoma via Notch and WNT. J Clin Invest. 2020 Mar 17. pii: 128994.

Espay AJ, Kalia LV, Gan-Or Z, Williams-Gray CH, Bedard PL, Rowe SM, Morgante F, Fasano A, Stecher B, Kauffman MA, Farrer MJ, Coffey CS, Schwarzschild MA, Sherer T, Postuma RB, Strafella AP, Singleton AB, Barker RA, Kieburtz K, Olanow CW, Lozano A, Kordower JH, Cedarbaum JM, Brundin P, Standaert DG, Lang AE. Disease modification and biomarker development in Parkinson disease: Revision or reconstruction? Neurology. 2020 Mar 17;94(11):481-494.

Faruqi S, Ruschin M, Soliman H, Myrehaug S, Zeng KL, Husain Z, Atenafu E, Tseng CL, Das S, Perry J, Maralani P, Heyn C, Mainprize T, Sahgal A. Adverse Radiation Effect After Hypofractionated Stereotactic Radiosurgery in 5 Daily Fractions for Surgical Cavities and Intact Brain Metastases. Int J Radiat Oncol Biol Phys. 2020 Mar 15;106(4):772-779.

Ibrahim AY, Amirabadi A, Shroff MM, Dlamini N, Dirks P, Muthusami P. Fractional Flow on TOF-MRA as a Measure of Stroke Risk in Children with Intracranial Arterial Stenosis. AJNR Am J Neuroradiol. 2020 Mar;41(3):535-541.

Ignacio KHD, Diestro JDB, Espiritu AI, Spears J, San Jose MCZ. Re-examining the exclusion criterion of early recurrent ischemic stroke in intravenous thrombolysis: A meta-analysis. J Neurol Sci. January 2020:116709.

Kalsi-Ryan S, Rienmueller AC, Riehm L, Chan C, Jin D, Martin AR, Badhiwala JH, Akbar MA, Massicotte EM, Fehlings MG. Quantitative Assessment of Gait Characteristics in Degenerative Cervical Myelopathy: A Prospective Clinical Study. J Clin Med. 2020 Mar 10;9(3). pii: E752.

Kalsi-Ryan S, Riehm LE, Tetreault L, Martin AR, Teoderascu F, Massicotte E, Curt A, Verrier MC, Velstra IM, Fehlings MG. Characteristics of Upper Limb Impairment Related to Degenerative Cervical Myelopathy: Development of a Sensitive Hand Assessment (Graded Redefined Assessment of Strength, Sensibility, and Prehension Version Myelopathy). Neurosurgery. 2020 Mar 1;86(3):E292-E299.

Linzey JR, Robertson FC, Haider AS, Graffeo CS, Wang JZ, Shasby G, Alotaibi NM, Cohen-Gadol AA, Rutka JT. Specialized Social Media Team Increases Online Impact and Presence: The Journal of Neurosurgery Experience. J Med Internet Res. 2020 Mar 5.

Mabin CA, Wilson JRU, Le Roux JJ, Majiedt P, Robinson TB. The first management of a marine invader in Africa: The importance of trials prior to setting long-term management goals. J Environ Manage. 2020 May 1;261:110213.

Mendes Pereira V, Cancelliere NM, Nicholson P, Radovanovic I, Drake KE, Sungur JM, Krings T, Turk A. First-in-human, robotic-assisted neuroendovascular intervention. J Neurointerv Surg. 2020 Apr;12(4):338-340.

Mithani K, Davison B, Meng Y, Lipsman N. The anterior limb of the internal capsule: Anatomy, function, and dysfunction. Behav Brain Res. 2020 Mar 13:112588.

Moghaddamjou A, Badhiwala JH, Fehlings MG. Degenerative Cervical Myelopathy: Changing Frontiers. World Neurosurg. 2020 Mar;135:377-378.

Nassiri F, Hachem LD, Wang JZ, Badhiwala JH, Zadeh G, Gladstone D, Scales DC, Pirouzmand F. Reinitiation of Anticoagulation After Surgical Evacuation of Subdural Hematomas. World Neurosurg. 2020 Mar;135:e616-e622.

O'Hara DM, Kalia SK, Kalia LV. Methods for detecting toxic α-synuclein species as a biomarker for Parkinson's disease. Crit Rev Clin Lab Sci. 2020 Mar 1:1-17.

Ong B, Wilson JR, Henzel MK. Management of the Patient with Chronic Spinal Cord Injury. Med Clin North Am. 2020 Mar;104(2):263-278.

Pasarikovski CR, Khosravani H, da Costa L, Heyn C, Priola SM, Ku JC, Black SE, Gladstone D, Yang VX. Outcomes of Endovascular Thrombectomy for Basilar Artery Occlusion. Can J Neurol Sci. 2020 Mar 6:1-18.

Ruiz-Lopez M, Munhoz RP, Kalia SK, Zorzi G, Nardocci N, Fasano A. Status dystonicus induced by deep brain stimulation surgery. Neurol Sci. 2020 Mar;41(3):729-730.

Sader N, Kulkarni AV, Eagles ME, Ahmed S, Koschnitzky JE, Riva-Cambrin J. The quality of YouTube videos on endoscopic third ventriculostomy and endoscopic third ventriculostomy with choroid plexus cauterization procedures available to families of patients with pediatric hydrocephalus. J Neurosurg Pediatr. 2020 Mar 6:1-8.

Senova S, Fomenko A, Gondard E, Lozano AM. Anatomy and function of the fornix in the context of its potential as a therapeutic target. J Neurol Neurosurg Psychiatry. 2020 Mar 4. pii: jnnp-2019-322375.

Trigiani LJ, Lacalle-Aurioles M, Bourourou M, Li L, Greenhalgh AD, Zarruk JG, David S, Fehlings MG, Hamel E. Benefits of physical exercise on cognition and glial white matter pathology in a mouse model of vascular cognitive impairment and dementia. Glia. 2020 Mar 10.

Westwick HJ, Elkaim LM, Obaid S, Fallah A, Tu A, Ibrahim GM, Weil AG. Interest and participation in global neurosurgery: a survey of Canadian neurosurgery residents. Neurosurg Focus. 2020 Mar 1;48(3):E21.

Wilson JR, Shuey MM, Brown NJ, Devin JK. Response to Letter to the Editor: "Hypertension and Type 2 Diabetes Are Associated With Decreased Inhibition of Dipeptidyl Peptidase-4 by Sitagliptin". J Endocr Soc. 2020 Feb 29;4(3):bvaa006.

Wilson JRF, Schiavo S, Middleton WJ, Massicotte EM, Moraes MV, Katznelson R. The Treatment of Perioperative Spinal Cord Injury with Hyperbaric Oxygen Therapy: A Case Report. Spine (Phila Pa 1976). 2020 Mar 19.

Witiw CD, Smieliauskas F, Ham SA, Traynelis VC. Cervical disc replacement: examining "real-world" utilization of an emerging technology. J Neurosurg Spine. 2020 Jan 17:1-7.

Yan H, Karmur BS, Kulkarni AV. Comparing Effects of Treatment: Controlling for Confounding. Neurosurgery. 2020 Mar 1;86(3):325-331.

Zador Z, Landry A, Balas M, Marshall JC, Cusimano MD. Data Driven Analysis Reveals Shared Transcriptome Response, Immune Cell Composition, and Distinct Mortality Rates Across Differing Etiologies of Critical Illness. Crit Care Med. 2020 Mar;48(3):338-343.

Zalai DM, Girard TA, Cusimano MD, Shapiro CM. Circadian rhythm in the assessment of postconcussion insomnia: a cross-sectional observational study. CMAJ Open. 2020 Mar 10;8(1):E142-E147.

VISITING PROFESSORSHIPS

Trainees:

Zsolt Zador (Cranial Base Clinical Fellow, St. Michael's Hospital) was an Invited Speaker at the Society for Critical Care Medicine. "Late-Breaking Studies Affecting Patient Outcomes." February 2020. Orlando, Florida.

IN THE MEDIA

Sunit Das and Anders Erickson were interviewed by EurekAlert! about their work using a medication used to treat lung cancer in the treatment of metastatic brain cancers. The piece can be accessed at: https://www.eurekalert.org/pub_releases/2020-03/smh-lct032420.php

PDFs OF THE MONTH

Mendes Pereira V, Cancelliere NM, Nicholson P, Radovanovic I, Drake KE, Sungur JM, Krings T, Turk A. First-in-human, robotic-assisted neuroendovascular intervention. J Neurointerv Surg. 2020 Apr;12(4):338-340.

Moghaddamjou A, Badhiwala JH, Fehlings MG. Degenerative Cervical Myelopathy: Changing Frontiers. World Neurosurg. 2020 Mar;135:377-378.

Witiw CD, Smieliauskas F, Ham SA, Traynelis VC. Cervical disc replacement: examining "real-world" utilization of an emerging technology. J Neurosurg Spine. 2020 Jan 17:1-7.

Zador Z, Landry A, Balas M, Marshall JC, Cusimano MD. Data Driven Analysis Reveals Shared Transcriptome Response, Immune Cell Composition, and Distinct Mortality Rates Across Differing Etiologies of Critical Illness. Crit Care Med. 2020 Mar;48(3):338-343.

UPCOMING MEETINGS

April 2020

<u>CANCELLED</u>: American Association of Neurological Surgeons (AANS) 88th Annual Meeting. Boston, Massachusetts. Apr 25-29, 2020. https://www.aans.org/Annual-Scientific-Meeting/2020

May 2020

Society of Neurological Surgeons (SNS) 2020 Annual Meeting. Philadelphia, Pennsylvania. May 30-Jun 2, 2020. https://www.societyns.org/2020-annual-meeting

<u>Update as of March 31, 2020</u>: "The SNS plans to proceed with the 2020 Annual Meeting as scheduled for May 30 - June 2. We are closely monitoring the COVID-19 situation and want to assure all members, attendees, faculty and staff that your health and safety are of the utmost importance as we reassess meeting and course plans. We will continue to communicate updates to you as necessary."

June 2020

<u>CANCELLED</u>: Canadian Neurological Sciences Federation (CNSF) 55th Annual Congress. Banff, Alberta. Jun 7-10, 2020. http://congress.cnsfederation.org/

RESIDENTS' CORNER

Brain School Schedule April 2020

Friday, April 3, 2020

Sickkids, Roy Hill Wing, Room 1527 0900-1200

TOPIC: <u>Tumors</u>

9-10 Cynthia Hawkins: Neuropathology of Pediatric brain tumors

10-11 Uri Tabori: Pediatric low grade gliomas

11-12 Derek Tsang: Radiation Therapy

Friday, April 10, 2020

Cancelled: Holiday Good Friday

Friday, April 17, 2020

Sickkids, Roy Hill Wing, Room 1527 0900-1200

TOPIC: Tumors

9-10 Michael Taylor: Neurocutaneous syndromes

10-11 Michael Taylor: Post fossa tumors

Friday, April 24, 2020

Sickkids, Roy Hill Wing, Room 1527 0900-1200

TBD

RESIDENCY PROGRAM COMMITTEE MEETINGS

Monday, April 20, 2020, 7-8 a.m., details TBA

NEUROSURGERY CABINET MEETING

Tuesday, May 26, 2020, 6:30 p.m., details TBA