



## MESSAGE FROM THE CHAIR

June 5, 2020

Dear Colleagues:

The COVID-19 epidemic has brought rapid and radical change to all aspects of our lives. With the implementation of social distancing, clinical practice, education and research missions have all been turned on their heads. Clinics were shut down and face-to-face education and research were put on hold.

These challenges though have created opportunities that hopefully will position neurology and the Augusta University Department of Neurology in a stronger position going forward. Like many of you, ambulatory services were quickly transitioned to telehealth. Led by Drs. Rivner and Smith, the department conducted over 1200 appointments using audio-video telemedicine in a period of weeks following the shutdown of clinic. Lectures and case discussion, from morning report to grand rounds, are now conducted online maintaining the interconnectedness of the department. New research opportunities were born.

Dr. Elizabeth Rutkowski, one of our newest faculty members, is leading an investigation into the potential longterm neurologic sequela of SARS-CoV2 infection (CONGA Trial, COVID-19 Neurologic and Molecular Prospective Cohort Study in Georgia).

Fortunately, the incidence of infection locally has remained low in our region, and although we are now transitioning back to in person clinic visits, it is clear that the technologies we have leveraged to manage social distancing and the connections that we have with each other will continue to be an important part of our lives.

Sincerely,



**Jeffrey A. Switzer, DO, MCTS, FAHA, FAAN**  
Professor and Chair of Neurology  
Director, Telestroke and Teleneurology  
Medical College of Georgia at Augusta University

706.721.7051  
jswitzer@augusta.edu

### CONTACT INFORMATION

Phone: 706-721-4581  
Fax: 706-721-1459  
1120 15th Street  
BI 3080  
Augusta, GA 30912

## NEW FACULTY MEMBERS

**Ben Barnes, MD** Assistant Professor

**Dr. Ben Barnes** grew up in Australia and moved to Kentucky in 2007, where he completed his undergraduate training, medical school, and residency in neurology. He is currently finishing his neuromuscular fellowship at Duke University, and is anxious to get started at AU in late July. Clinically, his interests include neuromuscular disease and electromyography, and he is hoping to establish himself in the ALS world. Outside of work, he enjoys spending time with his wife and two boys, watching rugby, drinking tea, and appreciating a good bow tie.





## Elizabeth Rutkowski, MD Assistant Professor

**Dr. Elizabeth K. Rutkowski** joined the AU neurology faculty this January as a clinician-educator and neurohospitalist. She graduated from University of South Florida College of Medicine and completed adult neurology residency at the University of California, San Francisco. She helped build Sutter Health's first neurohospitalist program in Northern California, serving as the Director of the Neurology Consultation Service and Director of General Neurological Telemedicine at California Pacific Medical Center, one of the largest private academic medical centers in California and a quaternary referral site for over 50 hospitals.



She has special interest in medical education and served on faculty at Geisel Medical School at Dartmouth, and prior to her medical training, held multiple teaching positions at the public high school and undergraduate faculty level. She has experience in simulation-based medical education and spearheaded the code stroke simulation curriculum for the UCSF neurology residency program. She is currently assisting here with the "MCG 3+" medical school curricular redesign.

As a neurohospitalist, her clinical expertise is in treating acute neurologic disorders requiring hospitalization, including encephalopathy and encephalitis, status epilepticus, stroke, acute demyelinating diseases, and traumatic brain and spinal cord injury. Her inpatient focus is on hospital quality improvement through providing excellent, expedient patient care to reduce costs associated with length of stay and hospital readmissions. She will also be directing the neurology consult clinic to evaluate urgent outpatient neurologic needs in a timely fashion.

## UPCOMING EVENT

-AUGUSTA UNIVERSITY PRESENTS-

### What's New in Neurosurgery and Neurology?

March 6, 2021 | Snelling Center | Augusta, GA

3165 Washington Road

Augusta, GA 30907

*first annual meeting*





## Idiopathic Intracranial Hypertension Evaluation and Treatment

Dan-Victor Giurgiutiu, MD

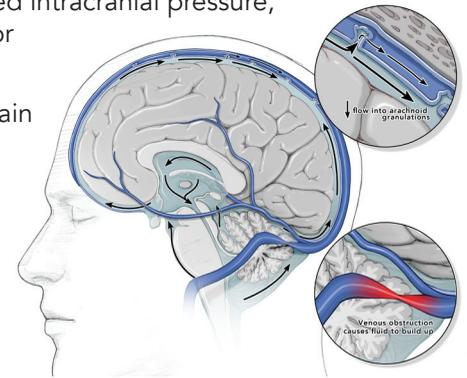
**Idiopathic intracranial hypertension (IIH)** presents with headache, pulsatile tinnitus, and progressive vision loss, due to increased pressure of cerebrospinal fluid (CSF). Pulsatile tinnitus is hearing your heartbeat in your own ears. IIH was called pseudotumor in the past. Patients presented with symptoms of increased intracranial pressure, including swelling in the back of the eye, headaches, but brain scans showed no tumor causing swelling inside the skull. Therefore “pseudo,” or false tumor.

All patients presenting with these symptoms should be evaluated with a CT or MRI brain to rule out tumor or brain bleed, and MR or CT venogram, to check for dural sinus thrombosis (clots) or stenosis (narrowing).

After ruling out a tumor, or intracranial hemorrhage, with a scan of the brain, the pressure of the fluid in the head is measured with a lumbar puncture. Normal CSF pressure is between 8 and 15 mmHg. In cases of idiopathic intracranial hypertension, the pressure over 15 mmHg.

To understand the causes and treatment of IIH, consider the production, circulation, and absorption, of CSF. CSF is produced in the choroid plexus in the empty spaces, or ventricles of the brain. CSF circulates around the brain, acting as a shock absorber, and cleaning agent, and it is absorbed in the choroid plexus inside the veins of the brain. The main veins are called dural venous sinuses, since they are enclosed in a tough material because dura.

CSF production is increased by medications such as vitamin A (retinol), tetracycline, cyclosporine, lithium, hormone replacement agents, and other steroids. CSF drainage is blocked by increased protein in the CSF, or decreased venous flow. MRI or CT picture of veins, or venograms, often shown a narrowing in one of the major veins draining the brain in IIH.



### Idiopathic Intracranial Hypertension Treatment

Treatment for IHC involves decreasing the production of CSF, or diverting CSF flow. In some cases, rather than diverting CSF, venous drainage can be improved, to reduce CSF pressure.

#### Medical Treatment

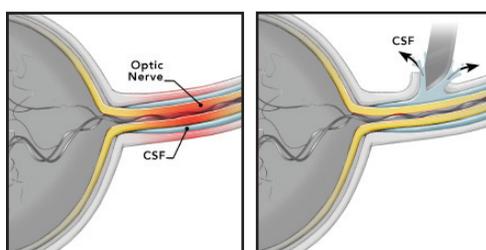
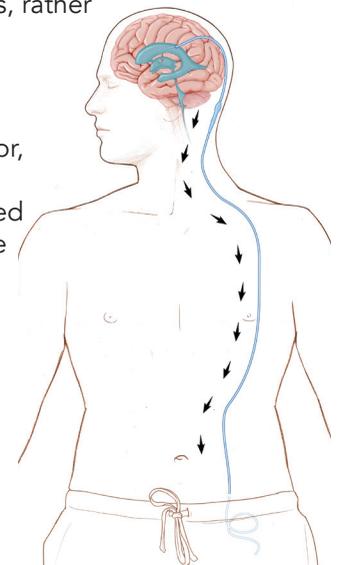
Acetazolamide, a carbonic anhydrase inhibitor, slows down the production of CSF. Topiramate is sometimes used because it decreases the production of CSF, also as a carbonic anhydrase inhibitor, and decrease the frequency and intensity of headaches. Side effects are related to the carbonic anhydrase function. Patient would have tingling in their lips, fingers, and toes. There is an increased risk of kidney stones. Carbonated drinks taste flat. The higher the dose of medication needed, the greater the risk of side effects.

#### Weight loss

Weight loss, either through diet and exercise, or with the aid of bariatric surgery, can reverse IIH. Weight loss of as little as 10% can allow patients to stop treatment with acetazolamide, but the usual necessary weight loss is around 20% of body weight.

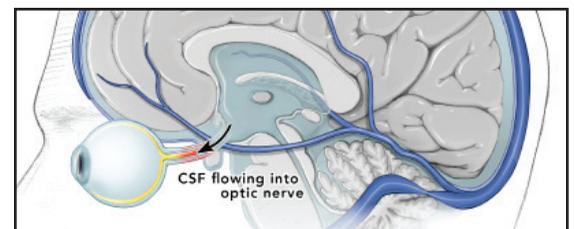
#### CSF Diversion, or Shunting

Repeated lumbar punctures help drain spinal and preserve vision. However patients wish to avoid repeat lumbar punctures. When medical therapy does not sufficiently decrease CSF production, a tube, or shunt, can be used to drain CSF from the brain, or spine. CSF is usually drained to the abdomen. CSF diversion, can help with headache, and preserve vision. Placing the tube inside the head, and then under the skin, down the neck and chest, down to the abdomen, requires surgery, and may require repeat surgery in the future.



#### Optic Nerve Fenestration

Optic nerve fenestration can preserve vision, but often does not help with headaches. The procedure requires a specialized ophthalmologist, who creates small holes along the optic nerve to drain CSF in the surrounding orbit.



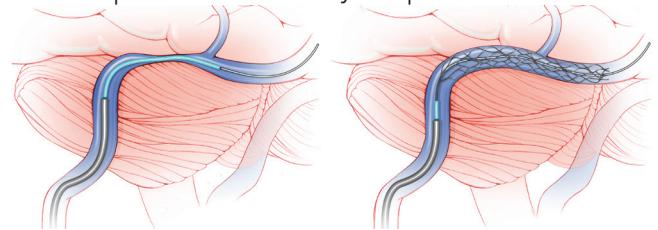


## Venous Sinus Stenting

A tube, or catheter, is navigated into the arteries of the neck, from a small puncture site where the thigh meets the trunk. Pictures obtained by injecting contrast through the catheter under x-ray imaging allow practitioner to observe the anatomy of arteries and veins in the brain, and find stenoses, or narrowings, which may be blocking CSF flow.

If such narrowing is found, we follow the veins from the leg to the head, and measure to see if there is a change in pressure at the site of narrowing, and how this correlates with the increased intracranial pressure suffered by the patient.

If there is a narrowing, causing an increased venous, and CSF pressure, this narrowing can be treated with a balloon, and stent, which is used to open the narrowing, and improve venous flow.



Complications from venous sinus stenting are rare, but can include subdural, subarachnoid, or intraparenchymal hemorrhage. For the majority of patients no repeat intervention is needed, and there is no external mark from the intervention. The rate of re-narrowing is low, around 1 and 10, over 10 years.

## Summary

IIH can lead to blindness, chronic headaches, and significant disability. Treatment is necessary to decrease pressure inside the head, preserve vision, and alleviate suffering. For some patients carbonic anhydrase inhibitors such as acetazolamide or topiramate are sufficient.

Most patients suffer from a combination of symptoms, and will require multifactorial treatment, including carbonic anhydrase inhibitors, and medication to decrease the intensity and frequency of headache. When the effects of carbonic anhydrase inhibitors cannot be tolerated, or when these medications do not sufficiently decrease CSF pressure, other interventions are needed. After these interventions patient's may be able to stop carbonic anhydrase inhibitors, but most are able to decrease the dose.

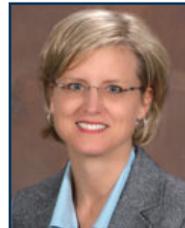
## DEPARTMENTAL NEWS & UPDATES



**Julie Kurek, MD** presented (along with **Dr. Colin McLeod**) at the Women and Parkinson's seminar.

Dr. Kurek appeared on the Jennie Montgomery Show to discuss women and Parkinson's Disease.

<https://www.wjbf.com/news/jennie-women-and-parkinsons-disease/>



**Suzanne Smith, MD** and **Rebecca Rahn, PA** were awarded a Services Leadership Award by the National MS Society.

**The Augusta Multiple Sclerosis Center at MCG** was certified as a Comprehensive Care Center by the National MS Society, which is the highest level of certification.

## Neurocritical Care UPDATES

- Created the first Neuro-ICU NP Fellowship in the University System of Georgia in collaboration with the College of Nursing
- ENLS certification achieved for nurses, nurse practitioners and residents (neurology/neurosurgery) working at the Neuro-ICU
- 2 posters accepted at NCS meeting in 2019
- 2 posters accepted at AAN meeting in 2020
- Quality improvement project to decrease Ventilator Acquired Pneumonia in collaboration with Respiratory • Therapist Department completed (PEEP 5 vs PEEP 8)
- In 2019, for first time, one of the Neurointensivist received the Fenwick Nichols Resident Teaching Award
- **Alfredo Garcia, MD** has been elected to the Fellowship in the American College of Physicians
- **Dr. Garcia** and **Dr. Manan Shah** have a joint appointment with the Department of Neurosurgery.



The MCG Department of Neurology always appreciates donations to support our residents, programs and research. You can make a donation by clicking this link. On behalf of those who we educate and care for, thank you for supporting the MCG Department of Neurology. <https://www.mcgfoundation.org/neurologysupport>