Researchers explore uncommon causes of stroke and how they impact treatment

What happens when you don’t find any of the more common causes of stroke: carotid stenosis, atrial fibrillation, hyperlipidemia, diabetes, hypertension and cardiovascular diseases?

That was the primary question at Tuesday’s symposium that provided clinical pearls for identifying rarer causes of stroke. These include CNS vasculitis, vasospasm, genetic disorders of small vessels, moyamoya disease, radiation, genetic collagen vasculopathies, endocarditis, infectious causes and mitochondrial disorders.

“We don’t see these disorders very often, but when we do, we should make sure we recognize them because treatment may be different than for traditional stroke,” said Theodore Wein, MD, program committee chair.

Vasculitis is probably the most common of the uncommon causes of stroke, said Wein, assistant professor of neurology and neurosurgery in the Stroke Prevention Clinic at McGill University in Montreal, Quebec.

Much of the symposium was devoted to CNS vasculitis, including how to distinguish it from vasospasm and atherosclerosis; the rheumatological perspective; the most effective imaging methods; the new immunosuppressant agents available; and treatment endpoints that can help you determine when more aggressive therapy is warranted to ensure patient well-being.

Other highlights included discussions on:
- When to treat endocarditis with antibiotics versus when to replace the heart valve to prevent stroke
- Surgical and nonsurgical challenges for treating fibromuscular dysplasia, moyamoya disease and other rare causes of blood vessel abnormalities that can cause stroke
- The role of traditional therapies for reducing the risk of stroke in patients with these disorders

Breakout sessions focused on specific patient subsets: stroke in pregnancy, stroke in cancer patients and stroke from infectious causes such as HIV and varicella zoster virus (VZV).

Presenters wrapped up the symposium with a session on stroke in transgender patients and the association between high-dose hormones and stroke risk.

Selecting patients for thrombectomy — beyond clinical trials to the real world

Mocco, MD, admits that the title for today’s debate is tongue-in-cheek.

“Nobody knows exactly the right way to do everything, but the idea is to create some great conversation and debate around some of the key things that people wonder about right now in the community,” said Mocco, category chair of the committee that created “I Know the Best Way to Select Patients and Perform Stroke Thrombectomy.”

Indeed, data from a dozen or so clinical trials in recent years have created buzz in the thrombectomy community. And that’s the rub, said Mocco, professor of neurological surgery in the Mount Sinai Health System in New York.

“Nobody knows exactly the right way to do everything, but the idea is to create some great conversation and debate around some of the key things that people wonder about right now in the community,” he said. “The data, although suggestive in varied directions, is supportive, but non-definitive to any particular conclusions,” he said. “The session presenters are presenting their beliefs based on their interpretation of the data, and...
THE POWER TO TREAT, BEAT + REDUCE STROKE RISK.

Let’s Transform the Stroke Care Continuum. Together.

JOIN US TONIGHT for a dinner symposium.

Current Controversies in Stroke: Stroke Care in the Real World

WEDNESDAY, FEBRUARY 6, 2019

6:30 p.m.  
Cocktail Reception

7:00 p.m.  
Dinner Symposium

Hilton Hawaiian Village
Waikiki Beach Resort
Honolulu, HI

Tapa Ballroom 1&2

Program Moderator:
Lee Schwamm, M.D.
Professor of Neurology,
Harvard Medical School
C. Miller Fisher endowed Chair in Neurology
Massachusetts General Hospital
Boston, MA

JOIN US TOMORROW for an Expert Theatre.

Personalized Medicine and Post-ESUS Risk Reduction Strategies.

THURSDAY, FEBRUARY 7, 2019

12:10-12:40 p.m.
Expert Theatre in the Exhibit Hall

Program Moderator:
Shadi Yaghi, M.D.
Assistant Professor of Neurology
Warren Alpert Medical School
of Brown University
Rhode Island Hospital Stroke Center
Providence, RI

LEARN MORE + REGISTER FOR THE DINNER SYMPOSIUM
medtronic.com/symposium19

Space is limited.

This program is limited to licensed healthcare professionals only. This event is not part of the official International Stroke Conference 2019 as planned by the International Stroke Conference Program Committee.
Q&A:

Preconference II Symposium: Stroke in the Lab World: Cutting-Edge Topics in Experimental Stroke Research

Q: What was your goal in developing this symposium?

Cho: It presented a 30,000-foot view of CNS disease from a pre-clinical perspective. In stroke patients and people with comorbidities, such as hypertension, diabetes and obesity, who have a higher risk of stroke, how do peripheral components affect the CNS injury? We wanted to look at stroke more globally, from the perspective of whole-body interactions, especially when we’re entering the era of translating what we know to reignite interesting areas of research.

Q: Four main topics were covered: brain-gut axis in stroke, ketones and ketosis, neuroimmune interaction in stroke, and imaging. How did you choose those topics?

LaManna: They’re relatively new and important areas of investigation. The role of gut microbiome may turn out to be extremely important in stroke risk factors, symptomology, treatment and prognosis. Ketones and ketosis may offer a new approach for treatment or co-treatment in neurodegenerative diseases and stroke. The immune system has become more important for brain disease over the last 10 or 20 years. And imaging methods and techniques are becoming more refined, to give us a new resolution for localizing functions and pathologies.

Q: Could a ketogenic diet play a role in stroke recovery?

LaManna: It might. We know ketones affect brain metabolism. The more ketones in the blood, the less the brain relies on glucose. After a stroke in recovery, there’s a problem with glucose metabolism. It’s time to talk to other stroke researchers and see where we might go with this in terms of clinical trials and other experiments.

Q: Imaging was also featured. What’s new in this area?

Cho: Imaging is changing in a number of exciting ways, such as the use of biomarkers for network organizations and the potential to create imaging tools to look at the structure of neuroplasticity in stroke.

Q: Neuroimmune interaction in stroke was also discussed. Can you tell us more about it?

LaManna: We used to believe the brain was immunologically privileged—that it didn’t have an immune response because it was protected by the blood-brain barrier. But we now know there’s a major inflammatory neuro-type response activated during a stroke that occurs and the ability to recover and rehabilitate. It’s time to review where we’re at right now. Overall, this meeting gives us a chance to see what’s on the horizon, who the players are and if you can do anything with the information in your own research or to advance the research of other investigators.
ISC honors 2019 awardees

ISC 2019 will feature lectures by the Feinberg, Sherman, and Willis award recipients during the Main Event sessions.

The ISC 2019 Stroke Research Mentor Award will be presented during the Main Event Session on Thursday.

Seven ISC 2019 abstract-based awards will also be presented in concurrent sessions in which researchers’ abstracts are presented. The awards honor investigators for their stroke-related research. Several of these awards also fund junior investigators to attend ISC.

**SUBMIT ISC 2020 AWARD NOMINATIONS**

AHA members: Submit your nominations for the ISC 2020 Feinberg, Sherman, Willis, and Research Mentor awards.

**Nomination Period Opens:** Feb. 6, 2019

**Nomination Period Closes:** June 26, 2019

Go to strokeconference.org/awardssandlectures for more information.

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**ISC ABSTRACT-BASED AWARDS**

- **Preventive Strategies Oral Abstracts**
  - **9:45 a.m., Wednesday**
  - Hall II
  - **William M. Feinberg Award for Excellence in Clinical Stroke**
    Recognizes significant contributions to the investigation and management of clinical research in stroke.
  - **Pat Lyden, MD, FAHA**
    Cadet-Sore Medical Center, Los Angeles, California
    “A Very Great Honor: Thrombolytic Therapy for Acute Ischemic Stroke”

- **Thursday Main Event 10:35 - 10:55 a.m., Hall II**
  - **David G. Sherman Lecture**
    Recognizes lifetime contributions to investigation, management, mentorship, and community service in the stroke field.
  - **Kennedy Lees, MD, FAHA**
    Institute of Cardiovascular and Medical Sciences, University of Glasgow, United Kingdom
    Learning from Collaboration

- **10:55 – 11:00 a.m. Stroke Research Mentor Award**
  Recognizes outstanding achievements in mentoring future generations of researchers in the field of cerebrovascular disease.
  - **Rebecca Gottesman, MD, PhD, FAHA**
    Johns Hopkins University, Bethesda, Maryland
    Stroke Recovery

- **Closing Main Event 11:30–11:50 a.m., Friday**
  - **Thomas Willis Lecture**
    Recognizes contributions to the investigation and management of stroke basic science.
  - **Frank Sharp, MD, FAHA**
    University of California Davis, Sacramento, California
    “Molecular Markers and Mechanisms of Stroke”

- **ISC ABSTRACT-BASED AWARDS**

  - **Preventive Strategies Oral Abstracts**
    - **9:45 a.m., Wednesday**
    - Kalakaua Ballroom C
    - **Robert G. Siekert New Investigator Award in Stroke**
      In recognition of Robert G. Siekert, founding chair of the American Heart Association’s International Conference on Stroke and Cerebral Circulation, this award encourages new investigators to undertake or continue stroke-related research.
      - **Ashkan Shoamanesh, MD, Hamilton, Ontario, Canada**
        Cerebral Microbleeds and the Effect of Anticoagulation on Outcomes in 3,699 Patients With Embolic Strokes of Undetermined Source: An Exploratory Analysis of the NAVIGATE ESUS Trial (41)
      - **Shreyansh Shah, MD, Durham, North Carolina**
        Safety and Outcomes of Intravenous Tissue Plasminogen Activator in Acute Ischemic Stroke Patients With Recent Stroke: Findings From Get with the Guidelines-Stroke (35)
    - **Basic and Preclinical Neuroscience of Stroke Recovery Oral Abstracts II**
      - **3 p.m., Wednesday**
      - Room 315
      - **Stroke Rehabilitation Award**
        Encourages investigators to undertake or continue research and/or clinical work in the field of stroke rehabilitation and submit an abstract to the International Stroke Conference.
        - **Xiaoming Hu, MD, Pittsburgh, Pennsylvania**
          Interferin 4 Improves White Matter Repair After Stroke By Promoting Oligodendrocyte Differentiation (55)

- **Vascular Cognitive Impairment Award (Tie)**
  - **7 a.m., Thursday**
  - Kalakaua Ballroom C
  - **Yorito Hattori, MD, PhD, New York, New York**
    ApoE4 Disrupts Cerebrovascular Microcirculation and Undermines White Matter Integrity and Cognitive Function (101)
  - **8:45 a.m., Thursday**
  - Room 315
  - **Stoke Basic Science Award**
    Encourages investigators to undertake or continue stroke research in basic or translational science that's laboratory-based.
    - **Jacob Hudobenko, MS, Houston, Texas**
      Amelioration of Ischemic Stroke Damage Through Inhibition of Interleukin-6 Signaling With Tocilizumab Requires Sex Specific Dosing (128)
    - **9:45 a.m., Thursday**
    - Kalakaua Ballroom C
    - **New Investigator Award (Tie)**
      - **Arvind B. Bambhroliya, MBBS, MPH, MS, Frederick, Maryland**
        Cognitive Function (101)
      - **Thomas R. Golden, PhD, New York, New York**
        ApoE4 Disrupts Cerebrovascular Microcirculation and Undermines White Matter Integrity and Cognitive Function (101)

- **Experimental Mechanisms and Models Oral Abstracts**
  - **10:35 - 10:55 a.m.**
  - **Room 315**
  - **Stroke Basic Science Award**
    Encourages investigators to undertake or continue stroke research in basic or translational science that's laboratory-based.
    - **Jacob Hudobenko, MS, Houston, Texas**
      Amelioration of Ischemic Stroke Damage Through Inhibition of Interleukin-6 Signaling With Tocilizumab Requires Sex Specific Dosing (128)
  - **Basic and Preclinical Neuroscience of Stroke Recovery Moderated Poster Tour**
    - **5:35 p.m., Thursday**
    - Kalakaua Ballroom C
    - **5:35 p.m., Thursday**
    - **Poster Board 9526**
      **Mordecai Y. T. Globus New Investigator Award in Stroke**
      Recognizes Mordecai Y.T. Globus’ major contributions to research in cerebrovascular disease and his outstanding contributions to the elucidation of the role of neurotransmitters in ischemia and trauma, the interactions among multiple neurotransmitters, mechanisms of hypothalamic neuroprotection, and the role of oxygen radical mechanisms and nitric oxide in brain injury.
      - **Meaghan Roy-O'Reilly, PhD, Houston, Texas**
        Age Exacerbates the Pathogenicity of Neutrophils in Ischemic Stroke (THI26)
THE WAIT IS OVER FOR PATIENTS WITH LIFE-THREATENING BLEEDS

VISIT BOOTH #102
Experts: Telestroke can treat patients despite geography

Now that the endovascular revolution has extended the treatment window for selected patients with acute ischemic stroke, 4.5 hours to reach more patients, said Nicole Chiota-McCollum, MD, MEd.

“Telestroke systems of care augment our reach by allowing us to assess a much broader swath of the population,” said Chiota-McCollum, who will co-moderate today’s session with Eric B. Anderson, MD, PhD, director of telemedicine at CortiCare in St. Petersburg, Florida.

Thrombectomy therapy is still only available to a small proportion of the population who have ready access to thrombectomy-capable centers.

During the session, attendees will hear about the potential of telestroke in the back of the ambulance, between spoke hospital and hub, employing multimodal imaging and reaching resource-limited areas.

The conventional hub-and-spoke model, consisting of the relationship between a comprehensive stroke center with outlying primary stroke centers and acute stroke-ready hospitals, works well, she said.

“I’m excited to hear these speakers talk about how we can take recent advances in technology and now push the conventional telestroke model into some innovative domains,” said Chiota-McCollum, assistant professor of neurology at the University of Virginia in Charlottesville.

“The next challenge is moving the point of telestroke care closer to the patient’s origin. That would be the prehospital setting, where time and triage are crucial.”

A key question, Chiota-McCollum said, is which is more important: the fastest treatment or the “right” treatment? Prehospital telestroke is an attractive tool to triage patients most likely to benefit from thrombectomy to a center capable of providing timely treatment.

“The sensitivity and specificity of scales to detect large vessel occlusion in the field leave something to be desired, and that’s why the promise of a telestroke evaluation to guide the triage decision holds a lot of interest,” she said.

In addition to enhancingprehospital triage, telestroke could speed up the transfer of patients from one hospital to another.

Lawrence Wechsler, MD, founder of the telestroke network at the University of Pennsylvania Medical Center, will present oninterfacility endovascular transfers, where patients selected for thrombectomy bypass the emergency department and go straight to the neuroangiography suite.

The session will also address the use of multimodal imaging in telestroke systems, which helps select patients most likely to benefit from thrombectomy by demonstrating the large vessel occlusion and the volume of salvageable brain tissue.

“There is a bit of a controversy surrounding which sites within a system are the right sites to apply that technology,” Chiota-McCollum said. “Is it worth the investment to install the software at spoke hospitals so that patients ineligible for thrombectomy are not transferred? And if so, who pays for it — the hub, who benefits by preserving their transfer capacity for the most appropriate patients, or the spoke, who benefits by keeping their patients within their community?”

The reach of telestroke remains contingent upon available technology. Some regions or countries without the technology infrastructure have limited resources.

“I’ll be interested to hear what our colleague from Thailand (Sombat Muengtaweepongsa, MD) has to say about this, particularly considering the ever-advancing technologies that allow us to make connections more readily across our global society,” Chiota-McCollum said.

Panel focuses on approaches clinicians can use to help reduce dementia risk

Improving vascular management and making lifestyle changes are key risk-reduction strategies for dementia that will be discussed by an expert panel today.

“The clinician will use this information (from the session) in their practice to better diagnose cerebral small vessel diseases, manage vascular risk factors and counsel their patients on lifestyle changes to reduce risk for dementia,” said Eric E. Smith, MD, associate professor of neurology at Cumming School of Medicine, University of Calgary.

Experts will present during the session:

- Alessandro Biffi, MD, assistant professor of neurology at Massachusetts General Hospital, will provide his perspective on stroke, small vessel disease and functional and cognitive decline. Biffi, who leads the Aging and Brain Health Research Group at Mass General, works to identify people at high risk for brain function impairment by focusing on the interface between neurological disorders, such as vascular dementia and Alzheimer’s disease, and psychiatric disorders, including anxiety and depression.

- Andreas Charidimou, MD, PhD, a postdoctoral clinical researcher in the Hemorrhagic Stroke Research Program at Massachusetts General Hospital, will discuss new research linking cerebral amyloid angiopathy to risk for dementia.

- The third presentation will address risk factors and prevention strategies in VCID from the perspective of a vascular neurologist and epidemiologist.

- The final presentation will focus on how social activities can be used to treat cognitive decline.

The American Heart Association would like to thank the following supporters of ISC 2019:

- American Well (formerly Avizia)
- Biogen
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- Shirley Ryan AbilityLab
- Viz
- Wolters Kluwer

AHA would also like to thank the following companies for their support of ISC 2019. This support was provided in the form of educational grants:

- Caréno
d- Chiesi
- Medtronic

UPCOMING SESSION
Telestroke Systems in the Endovascular Era: Extending the Extended Window (an AHA/ASA and American Academy of Neurology Joint Symposium)
3-4 p.m. Wednesday Room 310 BC

UPCOMING SESSION
Perspectives on Vascular Cognitive Impairment and Dementia 7:30 a.m. Wednesday Room 216 BC

CALL FOR SCIENCE
Submission Closes: Aug. 13, 2019
Submission Opens: May 22, 2019
Submission Closes: March 11, 2019
Submission Opens: Oct. 9, 2019
Submission Closes: Nov. 6, 2019

UPCOMING SESSION
Submit abstracts and/or session ideas by visiting strokeconference.org/submitscience on the applicable date above. Start planning now for the International Stroke Conference 2020, Feb 19-21, at the Los Angeles Convention Center.

Suggested Session Submitter Closes: Feb. 11, 2019
Suggested Session Submitter Opens: Oct. 9, 2019
Suggested Session Submitter Closes: March 11, 2019
Suggested Session Submitter Opens: May 22, 2019
Suggested Session Submitter Closes: Aug. 13, 2019
Suggested Session Submitter Opens: Nov. 6, 2019

CALL FOR SCIENCE

ISC 2020 AND NURSING SYMPOSIUM 2020
CALL FOR SCIENCE

Session Ideas
Suggested Session Submitter Opens: Feb. 11, 2019
Suggested Session Submitter Closes: March 11, 2019

Abstracts
Submission Closes: May 22, 2019
Submission Opens: Aug. 13, 2019

Late-Breaking Science and Ongoing Clinical Trials Abstracts
Submission Opens: Oct. 9, 2019
Submission Closes: Nov. 6, 2019

UPCOMING SESSION
Thrombectomy therapy is still only available to a small proportion of the population who have ready access to thrombectomy-capable centers.

Panel focuses on approaches clinicians can use to help reduce dementia risk.
Join us for an engaging panel discussion on LHI

**Wednesday, February 6, 2019**
7 PM–9 PM

Pi’ilinaio Ballroom, Prince Waikiki Hotel, Honolulu, HI

(Dinner provided)

**Chairperson:**
Greg Albers, MD

**Panelists:**
Edward Jauch, MD, MS, FAHA
Taylor Kimberly, MD, PhD
Stephan Mayer, MD, FCCM
Kevin Sheth, MD, FAHA, FCCM, FNCS, FANA, FAAN

This event is not part of the official International Stroke Conference 2019 as planned by the International Stroke Conference Program Committee.
Zivan dedicated his life and career to identifying treatments for stroke, notably the use of tissue plasminogen activator (tPA). His research, including animal models and clinical trials, led to findings that aided numerous people who suffered from ischemic stroke. He worked tirelessly to advocate for the worldwide use of tPA to treat ischemic stroke, when appropriate. Ziven trained numerous fellows, many of whom are in the forefront of today’s neuroscience research. He served on key panels for the U.S. Food and Drug Administration, the National Institutes of Health and the Department of Veterans Affairs throughout his career.

“He are all profoundly saddened by the loss of a great scientist, clinician and friend. Justin built a legacy of trainees committed to rigor and the primacy of data,” said Patrick Lyden, MD, Cedars-Sinai Medical Center in Los Angeles. “He taught dozens of trainees, cared for his family, influenced the course of medical history and left the world a better place than when he entered it. He will be deeply missed.”

Robert Harold Ackerman

June 1, 1935-Dec. 18, 2018

Ackerman, a pioneer in stroke imaging and prevention, devoted his career to studying blood flow to the brain for the diagnosis and treatment of stroke and stroke-prone patients. He was an international expert in the imaging evaluation of carotid disease and in cerebral blood flow and metabolism.

During his illustrious career, he had almost 100 scientific publications on neurovascular disease and served as a mentor to many of the leading neurologists and neuroradiologists worldwide. In 1974, Ackerman founded the first consultative noninvasive neurovascular lab in the country and for years focused on building a “diagnostic armamentarium” of non-invasive tools to detect and manage stroke-prone and acute stroke patients.

He also helped develop and champion the use of extracranial and transcranial Doppler ultrasound as safer, non-invasive alternatives to catheter angiography to diagnose carotid artery stenosis. Ackerman will be remembered by friends, colleagues and family as a devoted teacher, scholar and mentor. His wit, wisdom, gentle humor and keen insights will be missed by his patients and all who knew him.

“He was a wonderful mentor and highly valued friend,” said Stephen Davis, MD, of Royal Melbourne Hospital in Melbourne, Australia. “He was a great teacher and mentor to many stroke neurologists. He will be sorely missed.”

“Your bad cholesterol is downright evil.”

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IN MEMORIAM

Leaders, Legends and Legacies in Stroke

Justin Allen Zivin
Aug. 17, 1946-Feb. 17, 2018

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“Your bad cholesterol is downright evil.”

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CLAIM YOUR CME/CE CREDITS

You have two ways to complete your conference evaluation and claim your CME/CE credits for ISC 2019, pre-conference symposia and/or nursing symposium:

1. Go to the Communication Center in Registration in the Main Lobby, Level 1, in front of Hall II of the Hawaii Convention Center.
2. Visit learn.heart.org from any computer with internet connection.

CME/CE credit will not be available to claim for ISC 2019 after Aug. 8, 2019.

International attendees may obtain an attendance verification form at one of the self-service terminals in Registration in the Main Lobby, Level 1, in front of Hall II of the Hawaii Convention Center.
Science & Technology Hall (Hall II)

Expert Theater
Enjoy complimentary lunch while supplies last at the Expert Theater while learning about the latest advances in stroke practices, services and technologies.
Lunch provided by AHA. These events are not part of the official International Stroke Conference as planned by the AHA Committee on International Stroke Programming.

Preparing for an Emergency at Your Hospital: What's Next?
Thursday, Feb. 7
11:23 a.m.
Speaker: Elizabeth W. Huling, MD

Stroke Central
Stroke Central will feature a variety of scheduled programming and activities throughout the conference. Look for the complete schedule in the AHA Mobile Meeting Guide App.

3D Printed Models of Cerebrovascular Pathologies
Wednesday, Feb. 6
12:10–12:40 p.m.
Speaker: Steven K. Furlan, MD

Simulation Zone
The Simulation Zone provides hands-on interactive learning. Test your skill in diagnosing cerebrovascular pathologies, planning neuro-interventional treatments and performing endovascular procedures.

AHA/ASA HeadQuarters
Learn more about AHA/ASA initiatives, education, membership and publications.

Don’t miss these important late-breaking trials!

Opening Main Event
10:30 a.m.-Noon
Wednesday
Hall III
11:23 a.m.
Stroke Hyperglycemia Insulin Network Effort (SHINE) Trial Primary Results
Karen C. Johnston, University of Virginia, Charlottesville

11:35 a.m.
Glyceryl Trinitrate for Pre-hospital Ultra-acute Stroke: Main Results From the Rapid Intervention With Glyceryl Trinitrate in Hypertensive Stroke Trial-2 (RIGHT-2)
Philip M. Bath, University of Nottingham, Nottingham, United Kingdom

11:47 a.m.
Dual Antiplatelet Therapy Using Cilostazol for Secondary Stroke Prevention in High-risk Patients: The Cilostazol Stroke Prevention Study
Kazunari Tayaoda, National Cerebral and Cardiovascular Center, Suita Osaka, Japan

Simulation Zone
• Augmented Reality of ImmersiveView by ImmersiveTouch. Take a “Fantastic Journey” and explore CT and MRI imaging of “real” neurology patient scans with your fingertips. No longer limited to certain angles of view, you can easily view the target anatomy, clearly and accurately, as if it were a real physical object, in the palm of your hand.

• The Mentice VIST® G5 Simulator. Challenge your endovascular procedural proficiency within a wide range of clinically based training scenarios. The simulator system enhanced feedback provides learners with the information to improve safety and efficacy.

• Sheehan Medical Introduces the World's First Transcranial Doppler Simulator. See how this hands-on simulator trains without requiring constant faculty oversight. Immediate feedback is provided to trainees by Vizual Guidance, originally developed for NASA. TCDsim™ takes the guesswork out of learning TCD.

Expert Theater Schedule
Wednesday, Feb. 6
12:10-12:40 p.m.
Reversal of Novel Oral Anticoagulants in Patients
Experiencing Life-Threatening Bleeds: Review of Clinical Evidence and Practical Recommendations for Patient Management
Speaker: Mark Alberts, MD
Supporter: Portola

1-1:30 p.m.
Synchronizing Stroke Care with Artificial Intelligence
Speaker: TBD
Supporter: Viz

Thursday, Feb. 7
12:10-12:40 p.m.
Personalized Medicine and Post-ESUS Risk Reduction Strategies
Speaker: Shadi Yaqhi, MD, Assistant Professor of Neurology, Warren Alpert Medical School of Brown University, Rhode Island Hospital Stroke Center, Providence, Rhode Island
Supporter: Medtronic
THROMBECTOMY

continued from page 1

that’s going to provide the audience an incredible opportunity to come to their own conclusion.”

Attendees will hear from “in-the-trenches, experienced” neurologists involved in acute treatment, said Mark Fisher, MD, who will co-moderate the session with Stephen M. Davis, MD, professor of translational neuroscience at Royal Melbourne Hospital in Parkville, Australia.

Fisher said it’s time to take the leap from the tightly controlled randomized prospective trials of thrombectomy to the real world, where patients often don’t fit neatly with the inclusion and exclusion criteria in the trials.

The session will be of great interest to neurologists involved with hyperacute stroke care, he said.

“The issue of thrombectomy is rapidly evolving for treatment for acute stroke, and there are a variety of niches where the use of thrombectomy is not entirely clear,” said Fisher, professor of neurology at the University of California, Irvine.

How to select patients for thrombectomy who have pre-existing intracranial atherosclerotic disease lacks clarity, Fisher said. The challenge is distinguishing long-standing atherosclerotic narrowing of a vessel versus acute occlusion of a vessel with a blood clot.

Another difficulty is deciding which imaging modality — plain head CT, MRI, CT perfusion, MR perfusion — should be used to differentiate the irreversibly injured brain tissue from the penumbra, Fisher said.

Session attendees will also hear from Mark Parsons, MD, PhD, director of neurology at Royal Melbourne Hospital in Australia, who has recently published a study on using multi-modal imaging in thrombectomy selection.

As the time window for performing thrombectomy has widened, so has the potential for selecting patients with mild strokes (those with NIH Stroke Scale scores less than 6). Subjects in the DAWN trial had NIHSS scores of ≥10, while the DEFUSE trial subjects’ scores were ≥6.

“For patients with NIHSS scores of five or less and with evidence of an acute blockage on imaging, is it worthwhile to go and reopen the artery when the deficit is mild?” Fisher said.

Another early-stage project is aiming to be able to identify the severity of stroke and make important triage decisions based on the severity in the field.

Sheriya Chapman, MD, assistant professor of emergency medicine at Massachusetts General Hospital in Boston.

In a recent article, Zachrison described a model using location, onset time, patient age and sex, and prehospital stroke severity. It calculated the odds of a favorable outcome for a patient with suspected large vessel occlusions in a thrombectomy-capable hospital versus transport to the nearest tPA-capable hospital, with transfer to a thrombectomy-capable hospital if appropriate.

Another early-stage project is aiming to develop algorithms to automate detection of neurologic deficits in stroke patients. The novel approaches can enhance stroke care, starting with first responders in the prehospital setting, Chapman said.

“One thing we have definitely realized in the endovascular era is a need for a team-based approach to develop a well-organized stroke system of care,” she said. “That starts with reconceptualizing roles in the prehospital setting, work flow and triage decisions in the future and current state of acute stroke care.”

PREHOSPITAL

continued from page 1

ISC 2019 offers two types of poster sessions: professor-led tours and one-on-one Q&A presentations.

10 Professor-Led Poster Tours: 5:30-6:30 p.m. today in Hall I

Expert moderators will lead the tours, which are organized by category and include a short presentation and Q&A with each of the poster authors in that section.

To participate, review the Poster Abstracts section of the Final Program on page 54 or view the Moderated Poster Sessions on the AHA Mobile Meeting Guide App. At 5:20 p.m., arrive at the numbered section sign for your selected section/category. Headsets will be available to listen to the presenters.

Regular Poster Sessions: 6:30-7 p.m. today in Hall I

Presenters will be at their posters for informal Q&As with attendees. The one-on-one posters aren’t a part of the Professor-Led Poster Tours.

To see the posters featured in today’s Regular Poster Sessions, go to page 62 of the Poster Abstracts section of the Final Program or view the Poster Sessions on the AHA Mobile Meeting Guide App.

Professor-Led Poster Tours 5:30-6:30 p.m. Posters WMP1-WMP120

1. Acute Endovascular Treatment Moderated Poster Tour I
2. Acute Neuroimaging Moderated Poster Tour
3. Aneurysm and SAH and Other Neurocritical Management Moderated Poster Tour
4. Cerebral Large Artery Disease Moderated Poster Tour
5. Community/Risk Factors Moderated Poster Tour
6. Diagnosis of Stroke Etiology Moderated Poster Tour
7. Experimental Mechanisms and Models Moderated Poster Tour
8. Health Services, Quality Improvement and Patient-Centered Outcomes Moderated Poster Tour I
9. Intracerebral Hemorrhage Moderated Poster Tour
10. Nursing and Pediatric Stroke Moderated Poster Tour

Now, we’re also asking first responders to be able to identify the severity of the stroke and make important triage decisions based on the severity in the field.

Sheriya Chapman, MD
THE POWER TO
TREAT, BEAT + REDUCE STROKE RISK.

Solitaire™ Platinum
Revascularization Device

Reveal LINQ™
Insertable Cardiac Monitoring System

The Solitaire™ Revascularization Device is indicated for use to restore blood flow in the neurovasculature by removing thrombus for the treatment of acute ischemic stroke to reduce disability in patients with a persistent, proximal anterior circulation, large vessel occlusion, and smaller core infarcts who have first received intravenous tissue plasminogen activator (IV-tPA). Endovascular therapy with this device should be started within 6 hours of symptom onset.

The Solitaire™ Revascularization Device is indicated for use to restore blood flow by removing thrombus from a large intracranial vessel in patients experiencing ischemic stroke within 8 hours of symptom onset. Patients who are ineligible for IV-tPA or who fail IV-tPA therapy are candidates for treatment.

CAUTION: Federal law (USA) restricts this device to sale by or on the order of a physician.

Brief Statement: REVEAL LINQ™ LINQ11 Insertable Cardiac Monitor and Patient Assistant

INDICATIONS: REVEAL LINQ™ LINQ11 Insertable Cardiac Monitor: The Reveal LINQ Insertable Cardiac Monitor is an implantable patient-activated and automatically-activated monitoring system that records subcutaneous ECG and is indicated in the following cases: patients with clinical syndromes or situations at increased risk of cardiac arrhythmias; patients who experience transient symptoms such as dizziness, palpitation, syncope, and chest pain, that may suggest a cardiac arrhythmia. This device has not been specifically tested for pediatric use. Patient Assistant: The Patient Assistant is intended for unsupervised patient use away from a hospital or clinic. The Patient Assistant provides data management features in the Reveal LINQ Cardiac Monitor to initiate recording of cardiac event data in the implanted device memory. CONTRAINDICATIONS: There are no known contraindications for the implant of the Reveal LINQ Insertable Cardiac Monitor. However, the patient's particular medical condition may dictate whether or not a subcutaneous, chronically implanted device can be tolerated. WARNINGS/PRECAUTIONS: REVEAL LINQ™ LINQ11 Insertable Cardiac Monitor: Patients with the Reveal LINQ Insertable Cardiac Monitor should avoid sources of diathermy, high sources of radiation, electrocautery, external defibrillation, phototherapy, therapeutic ultrasound and radio-frequency ablation to avoid electrical reset of the device, and/or inappropriate sensing as described in the Medical procedure and EMI precautions manual. MRI scans should be performed only in a specified MRI environment under specified conditions as described in the Reveal LINQ MRI Technical Manual. Patient Assistant: Operation of the Patient Assistant near sources of electromagnetic interference, such as cell phones, computer monitors, etc., may adversely affect the performance of this device. POTENTIAL COMPLICATIONS: Potential complications include, but are not limited to, device rejection phenomena (including local tissue reaction), device migration, infection, erosion, and erosion through the skin. See the device manual for detailed information regarding the implant procedure, indications, contraindications, warnings, precautions, and potential complications/adverse events. For further information, please call Medtronic at 1-800-252-1518 and/or consult Medtronic’s website at www.medtronic.com. CAUTION: Federal law (USA) restricts this device to sale by or on the order of a physician.

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Now digitally enhanced, the latest edition of the AHA Journals’ Trend Watch is available online and includes content across the spectrum of cardiovascular and cerebrovascular disease. This issue of AHA Journals’ Trend Watch features a collection of top-trending articles published between April 2017 and March 2018, specifically those with high Altmetric scores. These articles—from across the entire AHA Journals’ portfolio—are generating buzz and have people talking on social media, in blogs, and in the news.

THE ISSUE IS ORGANIZED BY TOPIC TO MAKE FINDING RELEVANT CONTENT QUICK AND EASY!

- Heart Failure and Cardiomyopathies
- Cardiac Development, Structure, and Function
- Prevention Health and Wellness
- Epidemiology and Big Data
- Women and Special Populations
- Hypertension and Nephrology
- Dyslipidemia and Treatments

- Neuroscience and Stroke
- ATVB [Basic and Clinical]
- Electrophysiology and Arrhythmias
- Intervention
- Imaging and Nuclear Medicine
- Genetics and Genomics
- Critical and Emergency Care

Pick up your Trend Watch package for details about our smartwatch giveaway. Visit:
- AHA HeadQuarters Booth #451
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