Richmonders play important role in national seizure study
Promising results may benefit citizens & troops in the event of terrorist attack

Richmond, Virginia paramedics, citizens and VCU researchers played an important role in a national study to determine which method of administering anti-convulsant medication—intravenously or intramuscularly—was most effective in stopping a patient from a prolonged seizure. Seizures that do not stop within five minutes may become a life-threatening medical emergency.

Dr. Joseph Ornato, chairman of VCU Department of Emergency Medicine and operational medical director of the Richmond Ambulance Authority and Richmond Fire and Emergency Services, served as a principal investigator for the Rapid Anticonvulsant Medication Prior to Arrival Trial (RAMPART). Over the course of the 18-month trial, Richmond paramedics were among 4,314 paramedics nationwide who treated 893 people having prolonged seizures.

"The standard treatment is to give the anti-convulsant drug intravenously," says Dr. Ornato, "but when a person is having a grand mal seizure, the person can shake violently preventing the paramedics from starting an IV in approximately 40 percent of cases. The only choice is to try to get the drug into a muscle. The standard of care drug works very quickly through an IV but not through the muscle because it is not absorbed quickly."

The results of the study, recently published in the "New England Journal of Medicine," revealed that the autoinjection method of delivering the anti-convulsant medication Midazolam into the muscle of seizing patients can work as well or better than the standard treatment of the drug Lorazepam delivered through an IV.

The RAMPART study was supported in part by the U.S. Department of Defense. "In addition to seizures in civilian life," Dr. Ornato says, "there is a grave threat to soldiers on the battlefield, and the threat of a terrorist attack with nerve gas agents."

The autoinjection method of delivering medication is promising because in the event of a terrorist attack, paramedics would never have time to treat hundreds of victims with anti-convulsant medication intravenously.

"That’s what is so exciting about this trial," says Dr. Ornato. "We’re very proud of the fact that as Americans we’re trying to do something very important for our patients and the citizens we serve, but also we can get better answers to be able to help protect ourselves and our troops."

Dr. Ornato is triple board certified in internal medicine, cardiology, and emergency medicine. Last year, he received the Governor’s EMS Award for Outstanding EMS Medical Director, recognizing his instrumental role in promoting access to automated external defibrillators in airports, schools and businesses for cardiac arrest victims, and for developing a pre-hospital therapeutic hypothermia treatment program for the RAA that has helped save the lives of even more cardiac arrest victims.

Hope for those living with traumatic brain injury

“Community-based research is important because it involves collaboration between the academic institution and the community to conduct research that is beneficial to both,” says Dr. Kelli Williams Gary, assistant professor in the Department of Occupational Therapy in the VCU School of Allied Health Professions. Dr. Gary is passionate about her research and service to individuals with TBI. She is involved in a research project that enhances the skills of students and junior faculty interested in research for racial and ethnic minorities with disabilities. In addition, Dr. Gary is working on a grant to develop an intervention that will improve community participation and productivity for individuals with TBI living in low-income communities.

Dr. Gary has authored journal articles on racial and ethnic minorities with TBI. She served as vice chair of the Virginia Brain Injury Council for three years. Currently, she co-facilitates a brain injury support group for the Brain Injury Association of Virginia. She holds a Ph.D. in Health Related Sciences from VCU, two master’s degrees from Columbia University and a bachelor’s degree from Chicago State University.
What is a seizure?
A seizure is an episode of abnormal electrical activity in the brain that can be caused by epilepsy, brain injury, tumor, high fever, stroke, or high blood pressure. There are different types of seizures and symptoms:
- Staring, often mistaken for daydreaming
- Brief blackouts followed by confusion
- Drooling or frothing at the mouth
- Uncontrollable twitching or shaking of the body
- Eye movements
- Tooth clenching
- Sudden falling
A person may have warnings before a seizure: anxiety, nausea, vertigo or visual symptoms of flashing lights, spots or wavy lines before the eyes.

First Aid for Seizures
- Try to keep the seizing person from falling
- Lay the person on the ground and cushion the head
- Turn the person on the side to keep the tongue, saliva or possible vomit from blocking the airway
- Never put an object in the persons mouth
- Loosen tight clothing, especially around the neck
- Look for a medical I.D. bracelet with seizure instructions
- Call 911 after 5 minutes if the seizure continues
- Stay with the person until he or she recovers
- or until professional medical help arrives

Tips to Control Some Seizures
- Always take medications as prescribed by the doctor
- Do not skip taking medications
- Get plenty of quality sleep
- Exercise and eat a healthy diet
- Reduce stress
- Family members should observe and record seizure info to make sure the person gets proper treatment
- There is no specific way to prevent all seizures

Do you know?
• 1 in 10 people will experience a seizure in their lifetime.
• 3 million Americans are affected by epilepsy and seizures.
• 150,000 new cases of epilepsy are diagnosed each year.
• 45,000 children under age 15 develop epilepsy each year.
• More than 300,000 people over the age of 65 have epilepsy.
• With medical care, many people with epilepsy can live a normal life.
• Deaths associated with epilepsy include: accidents, drowning and sudden unexplained death in epilepsy, known as SUDEP.
• SUDEP is a leading cause of epilepsy-related death.
• Active epilepsy and seizure-related studies are being conducted at VCU Medical Center.

Contacts for more info
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www.epilepsy virginia.com - EFVA CENTRAL VIRGINIA CHAPTER 804-751-1505
www.epilepsyfoundation.org - EPILEPSY FOUNDATION OF AMERICA 301-459-3700
www.biiv.net - BRAIN INJURY ASSOCIATION OF VIRGINIA 804-355-5748
www.cureepilepsy.org - CITIZENS UNITED FOR RESEARCH IN EPILEPSY 800-765-7118
www.sudepaware.org - SUDEP AWARE 1-855-857-8337
www.sudep.org - EPILEPSY BEREAVED
www.epilepsyvirginia.com - EFVA CENTRAL VIRGINIA CHAPTER 804-751-1505
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www.sudepaware.org - SUDEP AWARE 1-855-857-8337
www.sudep.org - EPILEPSY BEREAVED
wwwclinicaltrials.vcu.edu - VCU EPILEPSY & SEIZURE RELATED TRIALS

Where to go for support
Richmond Epilepsy Support Group - for adults & families of children with epilepsy 804-628-0105
Richmond Supportive Survivors - for adults with TBI, family, friends 804-852-6644
Richmond Support Group - for adults with TBI, family, friends 804-355-5748
Chesterfield/Powhatan Support Group 804-276-5761

How to become involved
Epilepsy Awareness Day Richmond Nov. 10, 2012 - 9 a.m - 3 p.m. 804-751-1505
Epilepsy Awareness Stroll Midlothian Nov. 11, 2012 - 1 p.m - 3 p.m. 804-549-9875

Wear a helmet: prevent epilepsy
“Each year, 500,000 people go to emergency rooms due to bike injuries,” says Fernando Cordero, “but only between 15 and 30 percent of cyclists wear protective helmets.” According to Cordero, regional director of the Epilepsy Foundation of Virginia (EFVA), wearing proper helmets can prevent up to 85 percent of serious head injuries.

Data from a CDC study revealed that of 44.3 million children under the age of 21 who bicycled in the U.S., nearly 1 percent visited the emergency room because of biking accidents, and 23,000 of those children required additional care after sustaining traumatic brain injury (TBI), often resulting in epilepsy. Approximately one fatal head injury could be prevented every day, and one nonfatal head injury every four seconds, if every rider wore a helmet.

Today, as more and more children skateboard, rollerblade, and ride bikes and scooters, it is likely that without protective measures being taken, head injury statistics will climb.

Cordero says the EFVA’s campaign, “Use a Helmet: Prevent Epilepsy,” focuses on raising awareness about epilepsy and the effectiveness of wearing protective headgear: Thanks to EFVA, fourth graders and their families throughout Virginia are presented information on the correct use of helmets; brain injury prevention; and first aid techniques to be used in the event a seizure occurs.

Epilepsy Awareness Stroll   Midlothian   Nov. 11, 2012 - 1 p.m. - 3 p.m.  
804-549-9875