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History of Military Medicine
Torrie McGowan, MD, FACEP
A few hours after arrival, we had a bunch of casualties come in by chopper. I was assigned to a certain cubicle—it was number seven, so I thought it would maybe bring me good luck. The noise of the helicopters, et cetera, was a background of total chaos, yet at the same time there was a lot of organization in the chaos. I remember praying, "please, please give me something that I can handle". We had helmets and flak jackets on, and with the roar of the helicopters (one after the other) coming in, we couldn't hear anything. People were using hand signals which we were not oriented to. I felt lost immediately.

Then what came around the corner to my cubicle (which was just sawhorses and the litters were placed right on them), was a guy that had absolutely no face whatsoever and who had some air was bubbling and gurgling out of where his mouth had been. I said something like "I need a surgeon." I had done tracheostomies before, but only on children, so I said something like "I need a surgeon." I had done tracheostomies but only on children and my first reflex was to say, "I need a surgeon".

No one was listening and no one even heard me, but there were three corpsmen there—one who did the most perfect tracheostomy in the shortest period I had ever seen. Then another one just cut down on the top of the combat boot—because that was one of the cleanest areas on the body for these Marines—and put a large bore IV in perfectly. There was a surgical drape put over the guy's face, a lot of hand signals and, zoom, the litter was gone in a flash and put on one of the helicopters who had just come in to off load some more patients, and this one was obviously going out to the hospital ship, which was about 30 miles away in the South China Sea.

After that I remember mumbling "I don't belong here. This is a mistake. I'm not prepared for this,"—although I had felt prepared. I'd taken six months of surgery as elective, and I thought I knew the essentials, but obviously I was in a totally different environment, one that made up its own rules. The corpsmen and the docs worked 24 hours a day, and it was silently and highly coordinated without even saying a word. I envied them but wondered if I would ever reach that point myself.

You were doing things differently; the environment was different. Boy, there was going to have to be a lot of adapting.

The next morning when we struggled after a couple hours of sleep, two of the four guys I came with were gone. I was told they had severe asthmatic attacks...nothing more. I knew there was more to the story and understood why. I was probably secreting so many endogenous steroids in my body I couldn't wheeze if I tried to. So, it became clear to me, and the other remaining Doc I came with, you had to make it and if not, you were gone. There was no coddling just because you were new. I realized, my golly, the corpsmen were a group that I had to learn from and the other general medical officers.

No exaggeration, you saw one, you did one, and then you taught one. Over the next three or four weeks, I did as many procedures as I could possibly do. I understood what the
coordination was at the center—asked many questions, especially of the corpsmen who were patient and knowledgeable. The base was hit often but that never stopped the rhythm and once it happened we knew we would be busy in a few minutes. It was a baptism of fire that was necessary and if you made it, people were cognizant you were a new guy, and doing okay.

There was one physician who did take me under his wing—Ed Feldman. He came to Delta Med from Khe Sahn and was an obstetrician from California. He was kind, patient and pulled me in on any procedure or amputation. You had to learn quick, but it was a totally different environment. The pressure to learn and take responsibility was immediate.

When the year was over (and it was an eventful year in many, many ways), I did say, “Wow, you know, I learned so much but was equally convinced in being a teacher—an educator.”

I vowed then that no one was going to be in the same position I was. There were really no training opportunities at that time for the experience in Vietnam. We didn't have ACLS, and ATLS or courses like that. I had one more year since I was drafted in the Navy so I went to Newport, Rhode Island, where I began even teaching about what it was like and how it was different. Many of the regular staff there were never in Vietnam and became more interested in possibly making a career in international health.

Medical Student Corner
Jason W. David
2d LT, USAF, MSC
Class of 2018

Jason is a Uniformed Services University Medical Student who is currently on a month long medical student exchange with the Israeli Defense Force. He and his classmate, 2LT Spencer Heggars, have been on a medical exchange for 3-weeks at the Military Medicine Training Program at Hadassah Ein Karem Hospital in Jerusalem. They are currently at the IDF Military Medical Academy (Camp Ariel Sharon, Training Base 10). The exchange has lasted 1 month (they are in the 4th week).

The pictures below are of their meeting with the Surgeon General of the IDF, who they had the privilege to recently meet. As well as a picture of the military ambulance unit.

Spencer will be starting his Emergency Medicine Residency this summer at Medical College of Georgia in Augusta, Georgia and Jason will be starting his Emergency Medicine Residency this summer at University of Nevada in Las Vegas, Nevada.

A big applause for their continued support of emergency medicine!
From left to right: Jason; Brigadier General Tarif Bader, MD, MHA; Spencer; and Surgeon Sub Lieutenant Leo Potter (Royal Navy)

The Military Ambulance Unit

Residency Spotlight-Medical College of Georgia at Augusta University
Richard McNutt, MD
Residents at the Medical College of Georgia at Augusta University Emergency Medicine Residency Program have the opportunity to regularly participate in tactical medicine by acting as medical support for the Columbia County Special Response Team (SRT). Participation includes twice monthly, half-day training sessions consisting of PT (physical training), TCCC (Tactical Combat Casualty Care) style medical training, marksmanship (long gun and pistol), Dry-fire and Live-fire training in a fully capable shoot house. During the training sessions the residents act as both learners and teachers. They integrate with the SRT for PT and marksmanship training, and act as team members or medical providers as the team rehearses scenarios and plan for future operations. Residents also design and lead the medical portion of the training using TCCC principles. In addition to training with the SRT, residents provide on-site, tactical medical support to the SRT when they react to crisis situations in the area, as well as provide medical support for local events where the SRT acts as security.

The residents also plan and lead an annual "Tactical Day" where they teach the basics of tactical medicine to the entire residency. Columbia County SRT assists with this training by providing demonstrations, providing materials and facilities and answering resident questions.

Beginning in 2008, The Medical College of Georgia at Augusta University's (MCG at AU) Department of Emergency Medicine began an affiliation with the United States Army to serve as an additional training site for aspiring emergency medicine physicians. MCG at AU is currently training 24 Army & 22 Civilian EM residents.

EM Resident, Sheriff in orange vest, directing triage and medical treatment in a mass casualty exercise (photo provided by Lindsey Anthony)
Case Report: Treatment of Mal de Debarquement Syndrome- Kosovo
Joshua J. Oliver
CPT, USA, MC
Medical Director
TF MED, KFOR 23

Treatment of Mal de Debarquement Syndrome in a Deployed Environment

ABSTRACT
We report the case of a 26-year-old Caucasian female with persistent sensations of forward and reverse movement with spontaneous onset. This worsened over four weeks. The patient reported an episode of these symptoms five months prior, which lasted for three months before improving. Our case details the treatment of Mal de Debarquement syndrome in a deployed military environment, where an improvised version of re-adaptation of the vestibular ocular reflex was the only treatment option. The patient demonstrated a 50% reduction in symptoms following one week of treatment.

BACKGROUND
It is not uncommon for those who have spent time on a boat to feel as if they continue to rock back and forth once returning to land.1,2 This sensation can normally last for several hours to days and is called Mal de Debarquement (MdD) which translates into English as illness of disembarkment, commonly referred to as “sea legs.” In very rare circumstances the illness can
persist for months or remain indefinitely.1,2 This condition is termed Mal de Debarquement syndrome (MdDS) or in English, Disembarkment Syndrome. Little is known about this condition. It most commonly occurs after sea travel, but can also happen after air or land travel. Even less commonly, it can occur spontaneously. In reported cases, it is more common in women who have a history of migraine headaches.1,2 Patients do not describe symptoms of vertigo, where the room is spinning, nausea, or lightheadedness. Instead, it is a distinct sensation of continuous to and fro swaying motion at rest. Patients also describe resolution with passive motion, as one would experience when riding a boat or traveling in a car or plane.1,2 Physical examination and neuroimaging will not identify an etiology and previously studies have used normal exam and imaging as inclusion criteria.1 Treatment to date has focused on three modalities. The first is pharmacotherapy, primarily benzodiapenes and selective serotonin reuptake inhibitors (SSRI), as typical nausea and vertigo medications are ineffective.1,2 The second is repetitive transcranial magnetic stimulation (rTMS).3 The third is re-adaptation of the vestibular ocular reflex (VOR).4 For the purpose of this case we will discuss the third option.

CASE
A 26-year-old female presented to the Role 1-Enhanced Medical Treatment Facility, Camp Bondsteel, Kosovo, Operation Joint Guardian with a continuous sensation of moving forward and reverse as if “on a boat” for one month. She denied typical vertiginous symptoms. She also did not describe the typical side-to-side swaying sensation of MdMS as she sensed forward and backward motion. At the time of presentation, she was engaged in deployed military operations. She had first experienced the same unprovoked symptoms five months earlier that lasted for three months and spontaneously resolved. She remained symptom free for one month before the symptoms returned. The patient reported that her symptoms improved when traveling in a vehicle or when running outside, but not while running on a treadmill. She has a history of migraine headaches but neither migraine treatment nor common vertigo medications improved her symptoms. Her physical and neurologic exam findings and a magnetic resonance imaging (MRI) of her head and neck, with and without contrast, were unremarkable. As MdMS is a diagnosis of exclusion, the decision was made to pursue re-adaptation of her VOR as the only viable treatment option available in a deployed environment. While an MRI was available for diagnostics at a local national hospital, none were available for rTMS, and starting any sedating medications in a deployed environment is not considered safe.

A study by Dai et al describing this treatment placed patients in a circular room with vertical black and white stripes projected onto it. The stripes would spin in the opposite direction of the impulse of the patient’s symptoms. Simultaneously, an assistant would move the patient’s head 1. To the left, then 2. back to the middle, then 3. to the right, and 4. back to the middle again. The process was repeated for the duration of the treatment.4

In our resource-limited environment we repurposed a commercially available black garbage can and placed 2-inch-wide stripes of medical tape in a vertical orientation around the can, equidistant from each other (Figure 1). The can was suspended using utility cord. We restricted the patient’s visual field to the spinning stripes using commercially available safety goggles and
hospital bed sheets. The speed of the passive head movements performed by an assistant was determined by the frequency of the patient’s to and fro movements. To determine the frequency of her symptoms, she adjusted a metronome until it matched her symptoms. If her swaying motion modeled the arc of a pendulum, the metronome would sound every time the pendulum changed direction, and the position of the patient’s head changed every time the metronome sounded. To determine the leading direction of our patient’s symptoms, we performed the Fukuda stepping test, however, our patient walked forward which did not help determine which direction our stimulus should spin. This test result was consistent with her internal sensation as she described the sensation of rocking forward and backward. We spun the can at a constant speed, for four-minute sessions, three times a day, in accordance with the methods described by Dai et al.

As we were unable to determine the direction of her impulses, we started the treatment by spinning the can counterclockwise. However, after three days the patient felt her symptoms had not improved and asked to stop the counterclockwise treatment. We stopped treatment and waited until the following Monday to begin spinning clockwise. This was done so the patient would receive five days of continuous treatment as described in Dai et al.

We recorded her symptoms every morning using the Patient-Specific Functional Scale (PSFS). The PSFS asked the patient to assess three activities that her symptoms affected the most. The patient recorded concentrating, bending over to shave her legs, and sleeping. We also assessed her symptoms using an eleven-point numeric likert scale, where zero meant symptom-free, and ten meant the worst symptoms imaginable. We recorded these values each morning, and after every treatment session. She also completed the Dizziness Handicap Inventory (DHI) every morning for both trials. Cut off scores are 16-34 for mild perceived disability, 36-52 for moderate perceived disability, and 54 or more for severe perceived disability.

At the completion of the second treatment trial, using clockwise movements, the patient experienced significant improvements. We documented a symptom reduction of greater than 50% in all three PSFS activities at the completion of the treatment (Figure 2). Follow up at one, three, and seven days following treatment completion demonstrated continuing improvements. The results of the likert scale revealed that despite improvements at the start of her morning, her symptoms were acutely worse after each treatment, lasting approximately 4 hours. Though not measured, the patient noted during treatment she was symptom free for the duration of every four-minute treatment session, including the initial trial of counterclockwise treatments. The patient initiated treatment with a moderate perceived disability of 39/100 on the DHI, and ended the second treatment trial with a mild perceived disability of 20/100.

DISCUSSION
Disembarkment syndrome can cause disabling symptoms. If this patient’s symptoms had not improved, medical evacuation from the deployed military environment due to safety concerns would have been required.
This case highlights a non-pharmacologic treatment option for patients with MdMS. In resource-limited environments or settings in which a patient’s employment or preferences may preclude use of medications such as benzodiazepines or SSRIs, re-adaptation of the vestibular ocular reflex may represent a viable treatment option. Conventionally, such treatment requires a dedicated structure and projection equipment. That is what makes this case so novel. We were able to improvise a low-cost treatment option with commonly available supplies.

Additionally, we were not able to determine which direction to spin our improvised device based on the Fukuda test. This forced us to attempt a trial and error approach to her treatment. While not ideal, this may be another approach to adopt in patients that describe their symptoms as forward and backward as opposed to side to side and have unremarkable Fukuda stepping test results.

It is important to note that this is only one case and it does not include long-term follow up. However, our patient’s symptoms improved by over 50% after one week of treatment measured by the PSFS, and improved from moderate perceived disability to mild perceived disability as measured by DHI. That benefit lasted at least through her one-week follow up. Additionally, she noted that the improvement made it easier for her to complete her activities of daily living and much easier to perform her job.

CONCLUSION
The discussed case describes the treatment of MdMS in an active duty service member, in an austere environment. We describe a novel treatment option to evoke re-adaptation of the VOR in a resource limited setting in which traditional pharmaceutical options create occupational hazards and MRI either not available or only available for diagnostics not treatment.

Disclaimer: The view(s) expressed herein are those of the author(s) and do not reflect the official policy or position of Brooke Army Medical Center, the U.S. Army Medical Department, the U.S. Army Office of the Surgeon General, the Department of the Army, the Department of the Air Force and Department of Defense or the U.S. Government.

REFERENCES:
Figure 1: A commercially available garbage can suspend upside down by utility cord and framed by hospital sheets to isolate patient view of distracting surroundings. The patient sat in the chair draped in a sheet in the foreground of the picture. To replicate the therapy described by Dai et al, we wound up the utility cord manually. The can then unwound at a constant speed manually controlled by a provider by applying friction with their hand.

Figure 2: The PSFS was used to assess the patient’s symptoms. The three symptoms most affected were concentrating (symbolized with an x), bent over shaving her legs (symbolized with a square), and sleeping (symbolized with a triangle). Initial treatment during trial one, the stimulus spun in a counterclockwise direction, but after three days of this she felt there was no improvement. Treatment halted for 4 days until the following Monday so the patient could be exposed to five full days of clockwise treatment during trial two. At that point, her symptoms were recorded every morning and at morning follow up on days 1, 3, and 7.
A 60-year-old male presents to the ED with a complaint of chest pain. He reports a history of previous MI and states that his current pain is somewhat different than the pain associated with his prior infarction. He reports no nausea, vomiting, diaphoresis, or shortness of breath. He is well appearing and has unremarkable vital signs.
The patient’s EKG reveals a sinus rhythm with a rate of 76, 1st degree AV block, and a slightly prolonged QRS duration consistent with an intraventricular conduction delay. There is also a single premature ventricular contraction present. What about the ST segments? There is clear ST elevation in the anterior leads, best demonstrated in V1-3. The evaluating physician is immediately concerned about a possible anterior STEMI and activates the cath lab. Ultimately, the patient is ruled out for ACS and diagnosed with left ventricular aneurysm.

Left ventricular aneurysms are thought to arise in less than 5% of patients with STEMI and most frequently result from large transmural anterior MI’s. The associated EKG changes are most commonly noted in the anterior leads, consistent with the known predilection for aneurysms to form in the anterior wall. Following a typical MI, the ST segments may remain elevated for a period of time (usually less than 2 weeks). Q waves, however, tend to persist. The post infarction development of a left ventricular aneurysm is well known to produce persistent ST elevation in the absence of acute ischemia. Factors favoring left ventricular aneurysm as opposed to acute STEMI include no EKG changes compared to prior tracing, concave up ST segment morphology, no dynamic EKG changes, presence of well-developed Q-waves, and no significant reciprocal changes (particularly ST depression).

EM providers should add left ventricular aneurysm to their differential for causes of non-ischemic ST elevation. One should always maintain a high index of suspicion for STEMI, however, and it is preferable to make an occasional overcall rather than miss a true STEMI. Having the ability to review a prior EKG can be immensely helpful and it is critically important to interpret all EKG’s in the context of the patient’s clinical presentation.

Then and Now
Alan J. Sorkey, MD, MD, FAAEM, FACEP
ACEP's Viral Video Campaign to Expose Anthem Policy

ACEP recently launched a video campaign to expose Anthem Blue Cross Blue Shield for denying coverage to emergency patients, based on an undisclosed list of diagnoses, for conditions the insurance giant considers non-urgent. For a copy of the full press release, please contact Michael Baldyga, ACEP Senior Public Relations Manager. This policy is active in six states - Georgia, Indiana, Kentucky, Missouri, New Hampshire and Ohio - but more
Anthem states will follow, and more health insurance companies, if this effort isn't stopped. Anthem's policy is unlawful, because it violates the prudent layperson standard that is in federal law and 47 state laws.

Special thanks to ACEP video cast members Dr. Jay Kaplan, Dr. Alison Haddock, Dr. Ryan Stanton and Dr. Supid Bose - and ACEP staffers Mike Baldyga, Elaine Salter, Darrin Scheid and Rekia Speight!

Help us make the video go viral and top last year's that generated nearly 300,000 views on YouTube and Facebook! Please post it to Facebook pages, e-mail it to colleagues and Tweet about it using #FairCoverage and #StopAnthemBCBS.

Help Us Celebrate ACEP's 50th Anniversary

You can help us ensure we have the most diverse, and most complete, historical collection of everything!

- Follow us on Twitter and Facebook to see our weekly Tues/Thurs 50th Anniversary posts
- Talking 50th Anniversary on social media? Use EMeverymoment#
- Show your EM pride with ACEP's new “Anyone. Anything. Anytime.” Facebook profile frame
- Visit our 50th Anniversary site here for year-round updates
- Got something cool to share about the college's history, or your own with EM? Click here!
Upcoming CEDR Webinar

In depth review of the steps and process involved using CEDR for Group or Individual 2018 MIPS Reporting. Topics for this webinar will include selection of reportable measures, Advancing Care Information data entry, and Improvement Activity reporting through CEDR.

Register for the Reporting MIPS through CEDR webinar to be held on March 13, 2018 at 1:00 PM CDT. After registering, you will receive a confirmation email containing information about joining the webinar.

New ACEP Tool Helps you Keep Track of Ultrasound Scans

Emergency physicians regularly apply for hospital credentials to perform emergency procedures including emergency ultrasound. Theoretically, ultrasound training, credentialing and billing should be no different than other emergency procedures where training occurs in residency and an attestation letter from the residency is sufficient for local credentialing. When such training occurs outside of residency, "proctored pathways" often serve to assure competency. There is still a lack of understanding and awareness in the general medical community that emergency physicians routinely train in and perform point-of-care ultrasound.

The ACEP Emergency Ultrasound Tracker was created to assist members in achieving official recognition of ultrasound skills. This tool allows you to easily keep track of ultrasound scans you have performed over the course of your career in emergency medicine. It also allows you to upload relevant documents that attest to your training. After inputting and self-attesting to your ultrasound information you may download a letter of recognition from ACEP so long as you have attested to meeting the recommendations for emergency ultrasound training put forth in the ACEP Ultrasound Guidelines (PDF). We hope you find this tracker tool helpful and useful in your practice.
New ACEP Award

Community Emergency Medicine Excellence Award

We are pleased to announce that the ACEP Board of Directors approved a new award to recognize individuals who have made a significant contribution in advancing emergency care and/or health care within the community in which they practice. While the College currently has a number of awards to recognize excellence in emergency medicine this award is focused on the emergency physician who has made a significant contribution to the practice of emergency medicine in their community. Examples of significant contributions to the specialty and community may include, but are not limited to, community outreach, public health initiatives, or exemplary bedside clinical care.

Nominees must be an ACEP member for a minimum of five years and not received a national ACEP award previously. Entries are due no later than May 14, 2018.

The nomination form and additional information can be found here.

Articles of Interest in Annals of Emergency Medicine

Sandy Schneider, MD, FACEP
ACEP Associate Executive Director, Practice, Policy and Academic Affairs

ACEP would like to provide you with very brief synopses of the latest articles in Annals of Emergency Medicine. Some of these have not appeared in print. These synopses are not meant to be thorough analyses of the articles, simply brief introductions. Before incorporating into your practice, you should read the entire articles and interpret them for your specific patient population.

Babi FE, Oakley E, Dalziel SR, et al.
Accuracy of Physician Practice Compared to Three Head Injury Decision Rules in Children: A Prospective Cohort Study.
This study looks at the application of common decision rule regarding head injury in children and compare this to clinical judgement of experienced physicians. The authors did a prospective observational study of children presenting with mild closed head injuries (GCS 13-15). They found their group of clinicians were very accurate at identifying children who had a clinically important traumatic brain injury (sensitivity 98.8%, specificity of 92.4%). This was better than the decision rules also applied to these children which included PECARN, CATCH and CHALICE.

April MD, Oliver JJ, Davis WT, et al.
Aromatherapy versus Oral Ondansetron for Antiemetic Therapy Among Adult
Emergency Department Patients: A Randomized Controlled Trial.
Inhaled isopropyl alcohol as an aroma therapy has been described as effective in treating post-operative nausea. In this study, the authors compared inhaled isopropyl alcohol to placebo, alone or with oral ondansetron. They found that the aromatherapy with or without ondansetron had greater nausea relief than placebo or ondansetron alone. They recommend a trial of aromatherapy for patients with nausea who do not require immediate IV treatment.

e Silva LOJ, Scherber K, Cabrera d, et al.
Safety and Efficacy of Intravenous Lidocaine for Pain Management in the Emergency Department: A Systematic Review.
This is a systematic review of the literature on IV lidocaine for pain. There were only 6 randomized control trials of lidocaine for renal colic. The results were variable. Lidocaine did not appear to be effective for migraine headache but there were only 2 studies of this. The authors concluded that we do not have enough data at this time to definitively comment on the use of lidocaine for pain in the ED.

White DAE, Giordano TP, Pasalar S, et al.
Acute HIV Discovered During Routine HIV Screening with HIV Antigen/Antibody Combination Tests in 9 U.S. Emergency Departments
This study looked at HIV screening programs in 9 EDs located in 6 different cites over a 3 year period. There were 214,524 patients screened of which 839 (0.4%) were newly diagnosed. Of the newly diagnosed 14.5% were acute HIV (detectible virus but negative antibody) and 85.5% were established HIV (positive antibody test). This study reminds us that many patients with acute HIV will have a negative screening test that relies strictly on antibody. Many of these patients present with flu like illness as their initial presentation.

Axeem S. Seabury SA, Menchine M, et al.
Emergency Department Contribution to the Prescription Opioid Epidemic.
There has been much discussion of the opioid epidemic in both the professional and lay press. Emergency physicians tend to write a lot of prescriptions but for very small amounts. This study examined prescriptions for opioids from 1996-2012. During this period opioid prescription rates rose in private office settings and declined in the ED. For patients receiving high numbers of opioids, only 2.4% received opioids from the ED.

Welcome New Members

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