

EPIC

THE MAGAZINE OF THE GEORGIA
COLLEGE OF EMERGENCY PHYSICIANS

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GCEP Events



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Expected 2023 Legislation

We anticipate the following legislation to be introduced in the 2023 session and will be monitoring all pre-filings as we move into Summer and Fall.

- Surprise Billing Legislative Update
- Death Certificate Reform
- Network Adequacy



Insurance/Billing Issues

If you experience any issues related to billing, please reach out to Devin at devin@capitolstrategy.us. Please include all pertinent details, and redacted PHI so they we can best determine the state agency to reach out to.

Contact Your Legislators

It makes a difference if you contact your Representatives and Senators. Discuss the issues that are important to your practice, your patients, and your community. If you have personal relationships with any state elected officials, please help us by making us aware of these crucial relationships. If you need assistance finding your legislator, please click the link below.

[Find My Legislator](#)

Georgia Emergency Medicine Legislative and Advocacy Conference Update

We are on track to have the highest legislator and constitutional officers turnout for our GEMLAC conference yet.

[You can register for GEMLAC by clicking here!](#)



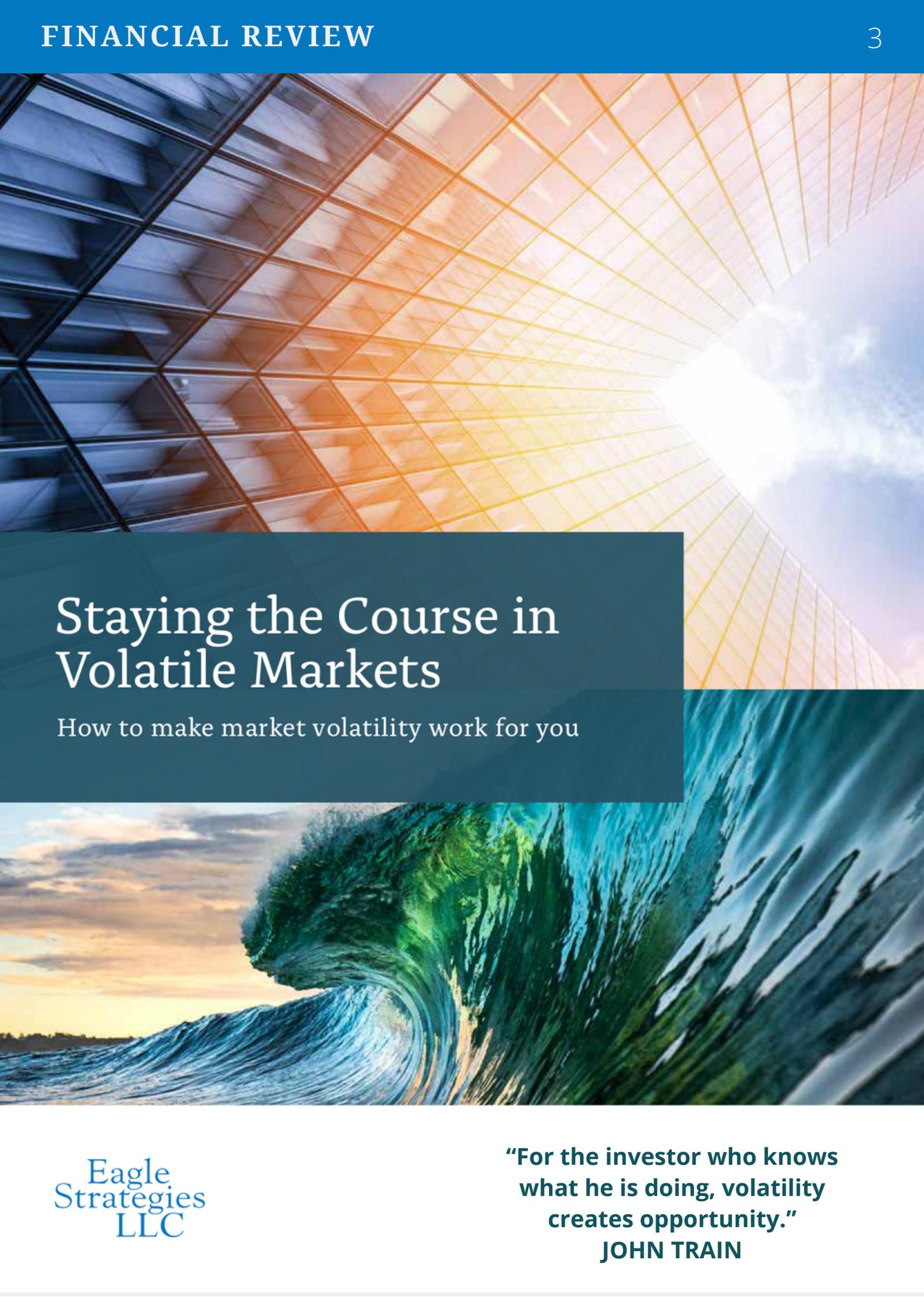
Be a part of the action! Join the PAC! (Click the icon above)

Our PAC needs your help to fully engage in the political process & support our friends
Please renew your membership today!

Looking Ahead

Keep an eye out for an email from the GCEP legislative team for a 2023 Pre-Legislative Session update. We will provide regular updates as the 2023 session gets underway.
Please call us with any questions.

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Staying the Course in Volatile Markets

How to make market volatility work for you

Eagle
Strategies
LLC

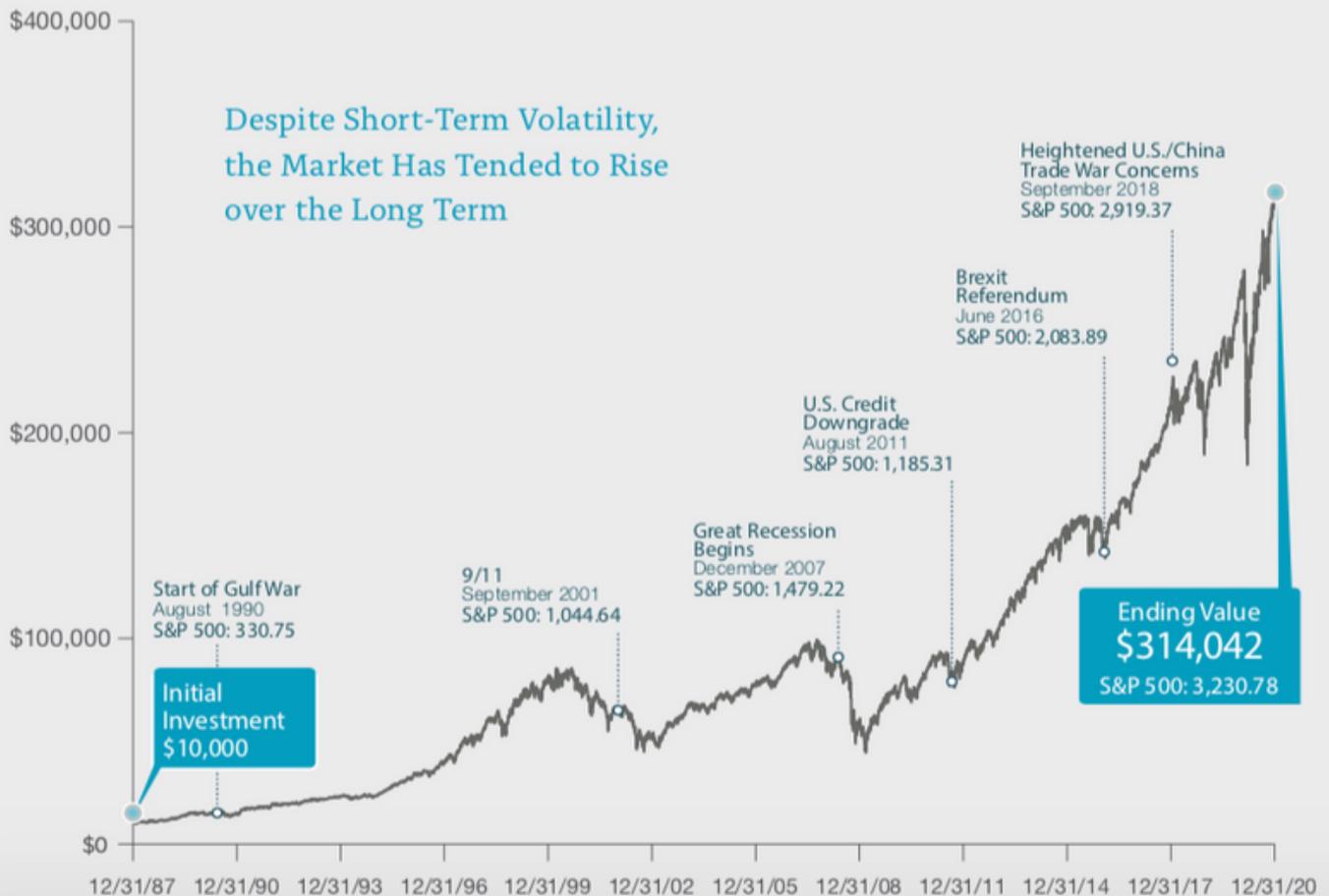
“For the investor who knows what he is doing, volatility creates opportunity.”
JOHN TRAIN

Keep a long-term perspective

When it comes to investing, there is no escaping the volatility of financial markets. As most investors understand, short-term price fluctuations of specific investments or markets—influenced by monetary policies, industry changes, and national or global events—are to be expected. While these market dips can be unnerving, it’s important to remember that they’re usually short-lived and can offer valuable opportunities. As shown in the chart below, during the past three decades the stock market experienced many ups and downs along the way—yet despite these disruptions, tended to rise over the long term.¹ Keeping volatility in perspective and being prepared for market shifts can help you stay focused on your long-term goals—and help increase your potential return over time.

SHORT-TERM VOLATILITY HAS LED TO LONG-TERM OPPORTUNITY¹

Growth of \$10,000 in the S&P 500 Index 12/31/87-12/31/20

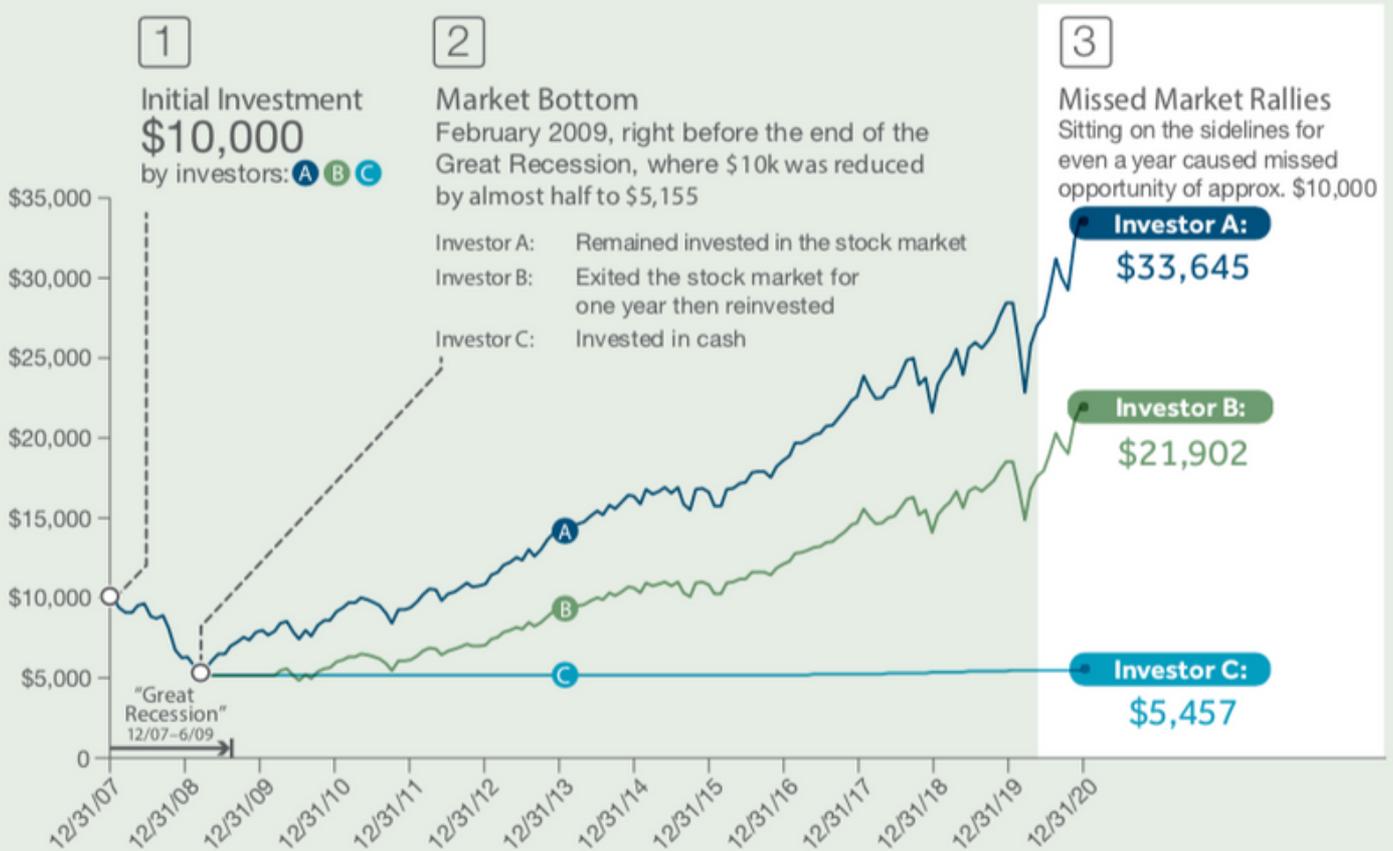


It's "time in"—not "timing"—the market that counts

During a volatile market, the fear of losing money can be powerful. It's often tempting to sell, and then sit on the sidelines and wait until things get better. However, no one can predict what the market will do a day, a week, or even a year from now—and as a result you can miss valuable opportunities for future price increases, as shown in the chart below. The answer is to avoid trying to "time" the market in the short term, and instead maintain your "time in" the market for the long run. Understanding that volatility will come and go—and learning to ride out times of market turbulence—is key to prudent, goals-based investing.

ATTEMPTS TO TIME THE MARKET MAY LEAD TO MISSED MARKET RALLIES²

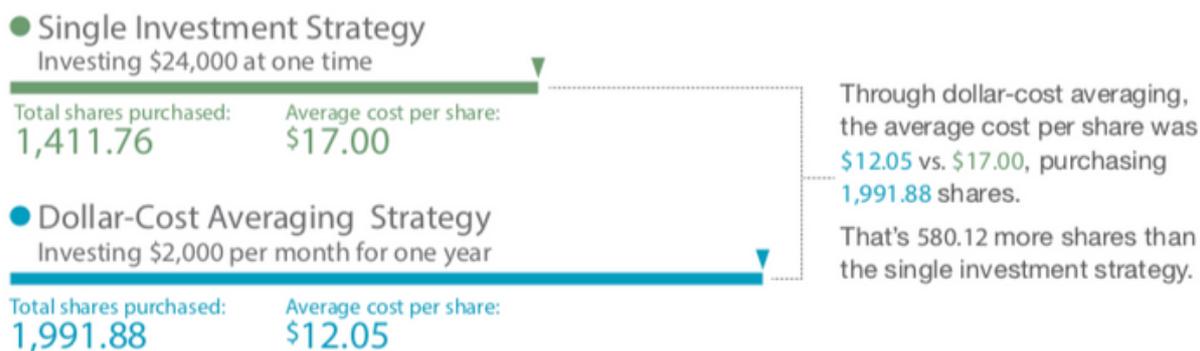
December 2007 - December 2020



Minimize the impact of volatility with smart strategies

Market fluctuations can make it difficult to know the best time to invest. An automatic investment strategy, like dollar-cost averaging, can help take the emotion out of investing. By investing a set dollar amount at regular intervals, rather than investing a lump sum, you buy more shares when the price is lower and fewer when the price is higher—minimizing the impact of price swings, and eliminating the risk of timing the market.³ Even though dollar-cost averaging does not guarantee a profit or protect against losses in a declining market, this investment technique has been effectively tested over time, as seen in the chart below.

INVESTING OVER TIME VS. A SINGLE INVESTMENT³



Stay invested and update your financial plan

Market volatility is inevitable—but doesn't need to disrupt your long-term goals. Because it's hard to determine when to buy or sell during turbulent times, it's critical to stay invested and remain with your personalized financial plan. In this way, you can better position yourself to take advantage of opportunities that arise, and avoid jeopardizing your goals for the future. Be sure to consult with your Financial Advisor to review your investment plan, make any necessary updates, and discuss strategies to help you build a more resilient portfolio.

About risk

All investments are subject to market risk, including possible loss of principal. Past performance is no guarantee of future results.

High-yield securities (commonly referred to as 'junk bonds') have speculative characteristics and present a greater risk of loss than higher-quality debt securities. These securities can also be subject to greater price volatility. Floating rate loans are generally considered to have speculative characteristics that involve default risk of principal and interest, collateral impairment, borrower industry concentration, and limited liquidity. Foreign securities are subject to risk of loss not typically associated with domestic markets, such as currency fluctuations and political uncertainty. Fixed-income securities are subject to credit risk – the possibility that the issuer of a security will be unable to make interest payments and/or repay the principal on its debt— and interest-rate risk—changes in the value of a fixed-income security resulting from changes in interest rates. Bonds are also subject to credit risk, in which the bond issuer may fail to pay interest and principal in a timely manner. Certain merger & acquisition transactions may be renegotiated, terminated, or involve a longer time frame than originally contemplated, which may negatively impact returns. Active investing is an investment strategy involving ongoing buying and selling actions by the investor. Active investors purchase investments and continuously monitor their activity to exploit profitable conditions. Active management typically charges higher fees.

1. Source: Morningstar, 12/31/20. This information is for illustrative purposes only and is not indicative of any investment. Past performance is no guarantee of future results. An investor cannot invest directly in an index.
2. Source: Morningstar, 12/31/20. The stock market is represented by the S&P 500 Index, which is an unmanaged group of securities considered to be representative of the stock market in general. Cash is represented by the 30-day U.S. Treasury bill. Treasury securities are backed by the full faith and credit of the U.S. government, as to payment of principal and interest if held to maturity. The data assumes reinvestment of income and does not account for taxes or transaction costs. Stocks have been more volatile than bonds or cash. Holding a portfolio of securities for the long term does not ensure a profitable outcome, and investing in securities always involves risk of loss. Past performance is no guarantee of future results. It is not possible to invest in an index.
3. Source: New York Life Investments, 12/31/20. This hypothetical example shows how dollar-cost averaging may work in a down market. It is for illustrative purposes only and does not reflect the actual performance of any investment product. Dollar-cost averaging does not guarantee a profit or protect against losses in a declining market. Investors should consider their ability to continue purchases through periods of low price levels.



**PROTECTION. RETIREMENT.
INVESTMENT. ESTATE.**

Trusted Guidance. Comprehensive Solutions.

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Emory University School of Medicine Department of Emergency Medicine Updates

The Emory EM Residency is thrilled to start the new academic year and welcome 19 outstanding interns. Interview season is around the corner and all EM programs will interview virtually. We will remain part of the Universal County Release Date for interview invitations: October 19, 2022. We congratulate all of the residency award winners from the 2022 graduation, and we want to acknowledge the Faculty Teacher of the Year, Dr. Randy Wallace. EM team members were recognized for their teaching, leadership and excellence. We are so thankful for the team's commitment to the residency program and to Emergency Medicine.

Emory EM is elated to be welcoming eight new fellows to the team. EMS: Dr. Jessica Walsh O'Sullivan; Medical Education: Dr. Nkele Davis, Toxicology: Dr. Salman Ahsan, Dr. Liz Eneida Rivera Blanco, Dr. David Kuai; Int'l Toxicology: Dr. Afra Alsuwaidi' from UAE, Dr. Fatma Al Balushi from Oman; Ultrasound: Dr. Mack Sheraton will be joining us in September.

Emory Mentoring for Under-Representative Students in Emergency Medicine (MUSE) Program

The first year for Emory EM's MUSE program is going really well and we're excited for the mentoring that will occur within the program. Dr. Maurice Selby is directing MUSE and two students from the Class of 2023 are currently rotating on campus with another student joining in September. Three 3rd year medical students are participating as well. MUSE is Emory EM's new longitudinal mentoring program for rising clinical year medical students from underrepresented in medicine groups who have an interest in pursuing a medical career.

Emory EM Accomplishments and Awards

- **"Top Docs:"** The team is celebrating Dr. Nicole Franks and Dr. Sheryl Heron as they represent Emory EM in Atlanta Magazine's 2022 Top Docs edition. You can read the Atlanta Magazine special edition [here](#) and read the Emory News Center story [here](#)
- **Dr. Liang Liu and Dr. George Leach** completed the ACEP and CORD Teaching Fellowship in early August
- Dr. Emily Kiernan was awarded a \$2 million HRSA grant over 4 years to implement tele-addiction services in rural counties in the state of Georgia
- Dr. George Hughes is the new Assistant Medical Director for the EUH Emergency Department. The Assistant Medical Director, in collaboration with the Emory University Hospital and ED Leadership Teams, is jointly responsible for the operations of the EUH Emergency Department
- Dr. Anwar Osborne is a small group advisor for the SOM's Undergraduate Medical Education in the Semmelweis Society
- Dr. Jeffrey Siegelman was invited to serve as Assistant Director of the Essentials of Patient Care course for the SOM
- Dr. Alaina Steck is the new SOM Thread Director of Pharmacology
- Dr. Amy Zeidan is a Society Leader in the SOM's Community Learning and Social Medicine Course
- **National Medical Association Convention in Atlanta:**
 - **Dr. Katrina Gipson** was elected secretary of the National Medical Association EM section
 - **Dr. Tricia Smith** was awarded the William Speight Lecture for her presentation on Technology in Medicine for the EM section
 - 2nd year resident received the Second Place Award in the EM Section for an Outstanding Research Presentation at the Georges Benjamin Research Symposium for his presentation on "Biological Aging: A Novel Tool for Contextualizing Health Disparities, Characterizing Environmental Experiences, and Informing Clinical Management"

Podcasts and Publications

Podcast: Dr. Alex Isakov participated in a discussion on monkeypox for EMS1.
<https://podcasts.apple.com/us/podcast/ems-response-to-the-current-outbreak-of-monkeypox/id884385830?i=1000564689775>

Dr. Anika Backster and Dr. Jeff Siegelman contributed to an article in SAEM Pulse's July/August 2022 issue titled "Intersection of Disability and Race or Gender (Then and Now): A Disproportionate Effect." https://issuu.com/saemonline/docs/saem_pulse_july-aug_2022/12

Dr. Lekshmi Kumar and Dr. Tim Moran from Emory EM contributed to an American Heart Association and Society of Vascular and Interventional Neurology Journal on the "Patterns of Emergency Medical Transport for Suspected Acute Stroke, Acute Myocardial Infarction and Other Diagnoses During Covid-19: A Retrospective Analysis of a Large Hospital-Based EMS..." <https://www.ahajournals.org/doi/10.1161/SVIN.122.000381#>

Dr. Shamie Das from Emory EM, Lauren Kasper from Grady Memorial Hospital, and Dr. Josh Mugele from Northeast Georgia Medical Center advocate for increased coverage for undocumented patients needing dialysis. Dr. Das and Kasper are finishing their research on the issue. Read the article here: <https://www.ajc.com/news/coronavirus/doctors-push-state-to-cover-dialysis-for-undocumented-immigrants/BLQWQVTEL5FFVABE6VI354MTIM/>

The AJC also featured an article on "New Guidelines released on eliminating racism, bias in medical school" after the Association of American Medical Colleges released a new document. Dr. Sheryl Heron from Emory EM noted in the article that "this work is absolutely imperative when you look at the diversity of this country." You can read the article here: <https://www.ajc.com/life/health/new-guidelines-released-on-eliminating-racism-bias-in-medical-school/RVQRLS7SFFCEXNVEXGIY5QF2ZU/>

Conferences

Doctors Brent Morgan, Ziad Kazzi, Jonathan de Olano, and Emily Kiernan from the Emory EM Tox Team will be presenting at the International Medical Toxicology Conference in Trabzon, Turkey October 27-28. Dr. Anna Yaffee from the Emory EM Global Health team and Gaylord Lopez, PharmD, from the Georgia Poison Center will also be presenting.
<http://med.ktu.edu.tr:8061/toxicology/scientific-program/>

Authors: Mustafa Rasheed M.D., Girgis Fahmy M.D., Bryan McNally M.D.

Introduction: The presentation of extremity pain is almost as broad as the differential. It is a common chief complaint we see in our patients. Depending on the history and the presentation, the diagnosis can be made with imaging or a thorough exam. Every now and then, you may encounter an unusual diagnosis.

Case Presentation:

A 41-year-old female presents with the complaint of right leg pain that radiates from her hip to foot with associated weakness. Her initial vital signs were unremarkable but on exam she was visibly uncomfortable. She gave a more detailed history while being tearful and rubbing her right leg to ease the pain. The pain had gradually worsened over 4 months and had progressed to difficulty bending her right knee. She has had similar pain in the left leg as well, but it is substantially worse on the right side. She denied any bowel/bladder incontinence, saddle anesthesia, numbness, tingling, or vision changes. Her past medical history included hypertension, hypothyroidism, generalized anxiety disorder, and HIV. She was compliant on her medications including anti-hypertensives and anti-retrovirals.

The physical exam revealed a globally rigid right lower extremity including the hip, knee, and all foot joints. She was severely tender to palpation or manipulation and had 4/5 strength. There was no pinpoint tenderness, or unusual swelling, erythema, or warmth along the leg. Her cranial nerves were intact, and she had normal upper extremity motor and neurologic function. Her left lower extremity had intermittent periods of rigidity like the other leg with moderate spasticity noted.

She had a Magnetic Resonance Imaging (MRI) two months prior for these symptoms which showed mild lumbar spondylosis without significant spinal canal or foraminal narrowing. No new imaging was obtained on this presentation and her lab work did not reveal any electrolyte derangements. After discussing the case with Neurology, the decision was made to give the patient diazepam and there was rapid resolution of her symptoms.

The presentation and rapid resolution of symptoms with diazepam led to the diagnosis of Stiff Person Syndrome (SPS). The mechanism of this disease is presumed to be auto immune and involves antibodies to glutamic acid decarboxylase (GAD), which plays a role in the synthesis of gamma-aminobutyric acid (GABA). These patients will commonly present with stiffness and rigidity that eventually progresses to a fixed deformity in the spine along with episodic spasms exacerbated by movement, noise, or emotional response. Physical exams will reveal unremarkable sensory function, but patients typically have abnormal gait and hyperreflexia. Taking the mechanism into account, the treatment involves enhancing GABA activity with medications such as benzodiazepines.

This patient was started on diazepam with resolution of her symptoms. Additionally, her presentations to the ED became significantly less and she was able to discontinue multiple medications for her Generalized Anxiety Disorder. The diagnosis of SPS is rare with an estimated incidence of 1 per million and can lead to severe disability if undiagnosed.

While the differential for extremity pain is broad and we commonly think of trauma, venous thrombosis, cellulitis as our main differentials, it is important to obtain a course of disease progression and think broadly. There are pathological processes which are not easily identified on imaging and basic lab work for extremity pain including Stiff Person Syndrome. The diagnostic test of choice is Anti-GAD 65 antibody, but the diagnosis is also suggested with improvement with benzodiazepines as the presentation as above. This is one more differential to think of the next time you read "extremity pain."

References:

- Baizabal-Carvallo JF, Jankovic J. Stiff-person syndrome: insights into a complex autoimmune disorder. *J Neurol Neurosurg Psychiatry*. 2015. Ca
- Dalakas MC. Stiff person syndrome: advances in pathogenesis and therapeutic interventions. *Curr Treat Options Neurol*. 2009.
- Helfgott SM. Stiff-man syndrome: from the bedside to the bench. *Arthritis Rheum*. 1999.
- Kimura J. *Electrodiagnosis in Diseases of Nerve and Muscle: Principles and Practice*, 2nd, FA Davis, Philadelphia 1989. p.558.
- McKeon A, Robinson MT, McEvoy KM, Matsumoto JY, Lennon VA, Ahlskog JE, Pittock SJ. Stiff-man syndrome and variants: clinical course, treatments, and outcomes. *Arch Neurol*. 2012.
- Shaw PJ. Stiff-man syndrome and its variants. *Lancet*. 1999 Jan.
- Solimena M, Follis F, Denis-Donini S, Comi GC, Pozza G, De Camilli P, Vicari AM. Autoantibodies to glutamic acid decarboxylase in a patient with stiff-man syndrome, epilepsy, and type I diabetes mellitus. *N Engl J Med*. 1988.

Toxicology: Herbal Abortifacients

Authors:

Melissa H. Gittinger, DO, FACMT: Dr. Gittinger is an assistant professor of emergency medicine and medical toxicology at Emory University. She is the chair of the toxicology interest group for SAEM, and her academic interests include medical education, toxicity of acute overdoses, and environmental poisonings and exposures in children and women of childbearing age.



David Kuai, MD: Dr. Kuai is a current first-year fellow at the Emory University/CDC Medical Toxicology program. He completed a 3-year residency in Emergency Medicine at the University of Florida in Gainesville, Florida. He has academic interests in drugs of abuse, addiction medicine, and natural toxins including plants and mushrooms.

Liz Eneida Rivera Blanco, MD: Dr. Rivera is a current first-year fellow at Emory University/ CDC Medical Toxicology program. She completed a 3-year residency in Emergency Medicine at St. Luke's Episcopal Medical Center Ponce, Puerto Rico. She believes Toxicology not only contributes to the managing of an acutely intoxicated patient but also contributes to public health aspects.



Following the reversal of *Roe v. Wade* by the SCOTUS, Twitter, TikTok, and other social media platforms are abuzz with posts describing alternative “natural” methods of abortion and pregnancy prevention. A significant portion of these messages recommended herbal abortifacients, an amorphous group of plants with biologically active compounds that have either historically or in recent times been used to induce abortion. Google searches and hashtags of these plants, including pennyroyal and mugwort, have garnered millions to hundreds of millions of views.

These herbal abortifacients are purported to have several mechanisms of action, including flushing the zygote from the fallopian tube, blocking implantation, alteration in reproductive hormone levels, and induction of uterine contraction through oxytocin-like activity. The efficacy of herbal abortifacients is varied, and these herbs and plants may be associated with the development of serious toxicity when used in dosages suggested for induction of abortion. Herbal preparations are not regulated or monitored for purity, and the concentrations of active and toxic compounds in a plant can vary widely depending on the part of the plant sampled, the season and conditions the plant grew in, and many other factors.

While not a comprehensive list of potential plants used for reproductive purposes, the selected plants described below have been historically used for these purposes and have well-established toxicities that we will discuss.

Pennyroyal, or *Mentha pulegium*, is a species of flowering plant from the mint family. It is available commonly as an oil that contains high concentrations of one of its primary biologically active ingredients, pulegone. Pulegone is metabolized by the liver to many different compounds, some of which are hepatotoxic. Similar to acetaminophen toxicity, pulegone metabolites deplete liver glutathione, leading to hepatotoxicity. Additionally, pulegone metabolites bind to and destroy proteins within the hepatocytes, worsening hepatic injury. These toxic effects produce nonspecific symptoms, including abdominal pain, nausea, and vomiting. While there is no specific antidote, treatment of pennyroyal induced hepatotoxicity includes supportive care and liver transplant in severe cases. Due to pulegone and acetaminophen's similar mechanism of toxicity, some case reports describe successful use of N-acetylcysteine in these patients as well.

Wormwood and mugwort are some of the most frequently mentioned plants on social media, and belong to the *Artemisia* genus. The toxic compound in these plants is thujone, which causes toxicity through inhibition of the GABA-A receptor. As GABA receptors are responsible for CNS inhibition, thujone can lead to neuroexcitatory effects, including tremors, agitation, seizures, hallucinations, and psychosis. There is no specific antidote and treatment is primarily supportive.

Caulophyllum thalictroides, commonly called blue cohosh, is another frequently mentioned herbal abortifacient. It is purported to cause uterine contraction through oxytocin-like effects. However, it contains n-methylcytisine, a nicotinic receptor agonist which can lead to toxicity. In overdose, mydriasis, weakness, tachycardia, and fasciculations can be seen. It has rarely also been associated with acute myocardial infarction and multi-system organ failure. Another promoted abortifacient is black cohosh (Actaea racemosa), a plant not related to blue cohosh. Black cohosh has been associated with subacute liver failure from an unknown toxin. Care of toxicity after ingestion of blue cohosh is supportive with the use of atropine to treat nicotinic symptoms and fluid resuscitation. Treatment of black cohosh toxicity is supportive with no specific antidote available.

The preceding list of herbal abortifacients discussed above is not exhaustive and many more are being promoted online for reproductive purposes. The efficacy of herbal abortifacients is varied, and patients may present with nonspecific symptoms of toxicity after their use. Symptoms may include nausea, vomiting, abdominal pain, confusion, seizures, syncope, renal failure, acute liver failure that triggers coagulopathies, cardiac arrest, or coma. Emergency physicians should have a high index of suspicion when caring for women of reproductive age who present with unexplained symptoms and clinical findings such as hepatotoxicity, acute renal failure, or neurologic changes. A careful history, including questioning about the use of herbal or plant-based products should be undertaken to ensure serious toxicity is not missed. If you are evaluating a patient with a concern for toxicity from herbal abortifacients or any other toxin, please reach out to your local poison center (1-800-222-1222) for further guidance and information.

Historically described herbal abortifacients:

Scientific name	Common name(s)	Abortifacient Mechanism	Clinical Presentation with toxicity	Clinical effects of greatest concern
<i>Actaea racemosa</i>	Black cohosh, black bugbane, black snakeroot, fairy candle	May have estrogenic effects which could induce uterine contractions and stimulate menses (mixed evidence)	Nausea, vomiting, dizziness, and headache	Large meta-analyses of RCTs have found it safe. <i>Isolated reports of hepatic toxicity and bradycardia limited by concomitant exposures or potential contamination.</i>
<i>Aristolochia spp.</i>	Birthwort, pipevine, Dutchman’s pipe	Prevents implantation	HTN, metabolic acidosis, hypokalemia, hypophosphatemia	With chronic use, rapid progression to renal failure. Worse 2-yr mortality than other causes of renal failure. Also increased risk of renal CA with chronic use.
<i>Caulophyllum thalictroides</i>	Blue cohosh (<i>note: much more toxic than black cohosh</i>), squaw or papoose root, blue or yellow ginseng, blueberry root	Stimulates uterine contraction through oxytocin-like effects	N/V, abdominal pain, diaphoresis, hyperthermia, seizures, hypoglycemia	Nicotinic receptor agonist (Mydriasis, Tachycardia, Weakness, Hypertension, Fasciculations) Also associated with acute MI and multisystem organ failure
<i>Lycopodium spp.</i>	Ground pines, creeping cedar, Cola de quirquincho	Unclear mechanism	Abdominal pain, vomiting, CNS depression	Cholestasis and hepatic failure
<i>Mentha pulegium</i>	European pennyroyal, mosquito plant, pudding grass	Unclear mechanism. <i>Direct cytotoxicity?</i>	Abdominal pain, N/V, dizziness, syncope, seizure Contact dermatitis	Acts like toxic metabolite of acetaminophen → leads to liver failure and possibly death
<i>Momordica charitria</i>	Bitter melon/ apple/gourd/ squash/cucumber, balsam pear	Stimulates uterine contractions, teratogenic	Abdominal pain, N/V, headache, hypoglycemia, dysrhythmia.	Active component is a (far) less toxic version of ricin. Can lead to hepatotoxicity although case reports of severe toxicity are sparse.
<i>Ruta spp.</i>	Rue, ruda, herb of grace/grass	Inhibits implantation	Abdominal pain, N/V, dizziness, jaundice, severe photodermatitis	Hypokalemia, renal failure, liver failure

Scientific name	Common name(s)	Abortifacient Mechanism	Clinical Presentation	Clinical effects of greatest concern
<i>Achillea millefolium</i>	Yarrow	Estrogenic and stimulates menstruation and induces uterine contractions	Limited data but potentially mild sedation, hypotension, and coagulopathy. Drug-drug interactions with many medications (lithium, anticoagulants)	
<i>Aloe vera</i>	Aloe	Stimulation of uterine contraction. Possible teratogen	Mild toxicity may have GI effects (N/V/D), abdominal pain and palpitations	Renal injury, GI bleeding, severe fluid losses from GI effects, and hepatitis.
<i>Angelica spp.</i>	Angelica root, Dong quai, wild celery	Teratogenic, unclear abortifacient mechanism	Limited data. Can cause photosensitivity rash, interfere with anticoagulation	
<i>Artemisia spp.</i>	Mugwort, wormwood, sagebrush	Inhibits implantation, stimulates uterine contractions	Restlessness, vomiting, and tremors with chronic use/large doses	Seizures at very high doses
<i>Azadirachta indica</i>	Neem, neem oil	Inhibits implantation, impaired embryo development and may lead to future impaired fertility	CNS depression, seizures, vomiting, acidosis, bradycardia, respiratory distress.	Limited data. After overdose, coma, decreased reflexes, elevated LFTs/lipase, and cardiac arrest have been described.
<i>Carica papaya</i>	Papaya, paw paw	Inhibits implantation, stimulates uterine contraction, (concentrated papaya extract)	Conjunctivitis, skin irritation, allergic reactions, hypoglycemia, coagulopathy	Limited data. High concentration ingestion associated with caustic injury leading to esophageal perforation)
<i>Cinammomum verum</i>	Cinnamon		Eye irritation, pulmonary edema (if inhaled), allergic reactions, tachycardia, dyspnea	Limited overdose data. Chest/lung/abdomen pain, N/V and syncope described in 1 overdose.
<i>Daucus carota</i>	Queen Anne's Lace, wild carrot	Inhibits implantation	Skin irritation Limited data, likely limited clinical effects.	Not toxic itself but resembles poison hemlock which is quite poisonous if mistakenly ingested.
<i>Gossypium spp.</i>	Cotton root bark	Embryotoxic, inhibits implantation, stimulates uterine contractions	Thrombocytopenia, hypokalemia, sinus bradycardia, dysrhythmias, transaminitis, fatigue, N/V/D	V-fib, new onset CHF, and hepatotoxicity
<i>Oenothera spp.</i>	Evening Primrose	Promotes cervical ripening/opening	N/V/D, abdominal pain, possible increased bleeding time	
<i>Petroselinum crispum</i>	Parsley	Stimulates uterine contraction	Contact dermatitis, allergic reactions, diuresis Severe toxicity seen with high concentration parsley oil ingestions.	Hemolytic anemia, hepatotoxicity, renal injury, cardiac dysrhythmia, GI bleeding, hemoglobinuria, methemoglobinemia, hypotension, bradycardia.
<i>Tanacetum spp.</i>	Tansy	Unknown	Seizures, tremors, CNS depression	Highly toxic, Neurotoxicity, seizures
	Vitamin C, ascorbic acid	Unknown	Renal stones, renal insufficiency, GI irritation	

Augusta University/Medical College of Georgia ER Updates

It has been a very busy summer for our residency in Augusta. This is always an exciting time of year, as we have had the privilege of working with an exceptionally talented group of EM-declared medical students the last few months. The future of our specialty is in excellent hands!

Our program continues to evolve the way we teach our residents. The ED-ICU has been going strong, allowing for some much-needed critical care in our very full hospital. We have also expanded our offerings of mini-fellowships in the residency, allowing residents to get additional training in fields such as ultrasound and pre-hospital care even while in residency. We are also looking forward to a joint cadaver lab with our partners at Northeast Georgia Medical Center. We are also performing joint simulations with our local trauma surgeons to give even better care to our trauma patients.

Our residents continue to do great things. Will Cary was named the GCEP representative from our program. A new resident study group was set up by Maya Alexandri. In addition, Maya just won a lecture competition at the Joint Services Symposium on Emergency Medicine with her stellar lecture on racial bias in pulse oximetry devices. Tron Bullard has been a leader with the joint trauma sims mentioned above.

We are limited by space in telling you all the amazing things that are residents are doing. They continue to do great things.

AU/MCG EMS Fellowship Updates

- Program Director: Dr. Bradley Michael Golden
- EMS Fellow: Dr. Andrew Warren
- International EMS Fellow: Dr. Ricardo Hughes

The EMS Fellowship welcomed two new fellows in July. Dr. Andrew Warren, a Medical College of Georgia graduate and Dr. Ricardo Hughes an Emergency Medicine Physician from Panama. The EMS fellowship is off to a great start! Orientation consisted of working on the ambulance, shift supervisors, dispatch, emergency vehicle operations course (EVOC), and ground school with AirCare. Since completing ground school with AirCare the fellows will start to ride as 3rd riders and transition to core crew as flight physicians. The first research project has been completed and submitted to the National Association of EMS Physicians. It consisted of 2nd year medical students assessing a standardized patient suffering from a stroke and working with Paramedics from the center of operational medicine and attending Neurologists. In September, Drs. Golden and Warren will be staffing the first aid building and be the only medical providers on Monhegan Island, Maine for one week.



Kennestone Residency



Welcome to our newest class of incredible residents!!!

On May 18, 2022, we turned 5. The Wellstar Kennestone Emergency Medicine residency received its initial accreditation on May 18, 2017, and we have come a remarkably long way since our first few months as a program. We have now recruited and matched 66 incredible residents with a diverse background and life experience. We have graduated 24 residents who are practicing in a variety of settings across the country, from rural to urban to academic. We have had 4 graduates match into fellowships thus far, with an additional 3-4 are planning to do so this year. We have expanded our educational and clinical footprint to include:

- Trauma surgery at Atlanta Medical Center
- Rural emergency medicine at Sylvan Grove Hospital
- Community emergency medicine at North Fulton Hospital

Along with our continued programmatic growth and success, our department continues to innovate in other aspects of emergency medicine education. Under the leadership of Tariq Noohani, DO, we are in our second year of a comprehensive two-year Administrative Fellowship engaged in training the next generation of leaders in EM. Our fellows not only have the opportunity to complete a fully funded master's degree, but to take on leadership including medical direction.

A few of our most recent faculty and resident accomplishments include:

- Dany Accilien, MD, second year fellow: Medical Director of the ApolloMD Telehealth program
- Sasha Degtyar, MD, EM3: Member of the 2022 Advanced Research Methodology Evaluation and Design class
- Sandeep Bala, MD, EM2: GCEP board resident representative
- Ted Stettner, MD, Program Director: GCEP education committee, CEMC Co-Director
- Desiree Lacharite, MD (Medical Director) and Nauman Rashid, MD (Research Director): selected as Atlanta's Top Docs by Atlanta Magazine

I am incredibly proud of how far we have come in such a short period of time, and excited about our future. Our faculty and residents are truly world-class and it is an honor to be a part of this program.

Ted Stettner, MD

CASE SUMMARY:

A five-year-old girl was injured in a high-speed motor vehicle accident; her family initiated compressions at the scene. Nearby paramedics arrived almost immediately and transported her to a trauma center within minutes, though she went into cardiac arrest en route. She was intubated with cervical collar in place, with visualization of normal cervical anatomy. With aggressive resuscitation, she rapidly regained return of spontaneous circulation but required circulatory support with blood products and an epinephrine infusion. Computerized tomography imaging of her head, chest, abdomen, and pelvis failed to demonstrate catastrophic injuries. Re-evaluation revealed interval development of significant anterior neck swelling.

What diagnosis is demonstrated by the circles in the image?

**DIAGNOSIS:**

Craniocervical junction dissociation (concomitant atlanto-occipital and atlantoaxial dissociations)

Review of the patient's lateral scout images revealed both atlanto-occipital and atlantoaxial dislocations. Recognizing these injuries as nonsurvivable, resuscitation was discontinued, and the patient quickly passed away in the emergency department.

DISCUSSION:

About one-third of all cervical spine injuries involve the craniocervical junction. Patients ages seven and younger are at higher risk for craniocervical junction dislocations because of the larger head-to-body ratio, flatter atlanto-occipital joints, and weaker ligaments. Lateral radiographs can help identify these injuries, though computerized tomography scans will provide more anatomic detail.¹ Combined injuries to both the atlanto-occipital and atlantoaxial segments are less common and typically result in severe neurologic injury or death.²

Factors which permitted this patient to survive as long as she did include the close proximity of the accident scene to both the responding ambulance as well as the trauma center, which facilitated a rapid response time and timely resuscitative measures.

REFERENCES:

1. Riascos R, Bonfante E, Cotes C, Guirgui M, Hakimelahi R, West C. Imaging of atlanto-occipital and atlantoaxial traumatic injuries: what the radiologist needs to know. *Radiographics*. 2015;35(7):2121-2134.
2. Bisson E, Schiffert A, Daubs MD, Brodke DS, Patel AA. Combined occipital-cervical and atlantoaxial disassociation without neurologic injury: case report and review of the literature. *Spine*. 2010;35(8):E316-321.

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Georgia Emergency Medicine Leadership & Advocacy Conference

December 1-2, 2022
The Ritz Carlton,
Lake Oconee
Greensboro, GA



Room Reservations at The Ritz

Enjoy the beautiful lights and holiday charm of The Ritz-Carlton Lake Oconee. Once you register for the meeting, you will receive the information on how to make your hotel reservations.

Program

We are expanding the program to 1 & 1/2 days—**8:00am-5:00pm on Thursday & 8:00am-12:00pm on Friday.**

We are still putting the educational content together, but we are excited to welcome key Georgia Legislators as part of the program and updates from your colleagues on issues for your practice.



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Save the Date!

2023 Rural Emergency Practice Conference

Feb. 25-26, 2023 | Augusta, GA



**Medical College of Georgia
at Augusta University**

- Save the date for a hands-on, interactive course featuring world-class lectures, a chance to ask the experts, and a live emergency procedures course!

1) Ultrasound Lab - practice your hands-on Point of Care Ultrasound (POCUS) skills for Ultrasound Education. This state of the art lab will provide a unique opportunity to practice ultrasound skills using simulators, phantoms and live patients.



2) Live Tissue Lab - practice your life saving procedural skills in a live tissue lab. This lab will include high acuity, low volume invasive procedures that can save lives in the ER. This lab will be limited in the number of participants.

3) Cadaver Procedure Lab -practice commonly performed procedures in the cadaver lab: including central venous access, paracentesis, nerve blocks, suturing, etc. This lab may be limited in the number of participants.



4) Simulation Lab - practice your medical decision making in a state of the art simulation lab at Augusta University. You will have the opportunity to work through several cases using your life saving and medical diagnostic skills.



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