

MACEP News

November 2013 | Vol. 38 | No. 2

Public Health Committee Update.....	3
Case Management.....	4
Medical Student of the Year Award...	7
MEMPAC.....	8
MACEP Awards Program 2014.....	8
Call for Board Nominations.....	8
Sued for Malpractice?.....	9
Resident Grant Summaries.....	10

Newsletter of the Massachusetts College of Emergency Physicians

860 Winter Street
Waltham, MA 02451-1414
Telephone (781) 890-4407
Fax (781) 890-4109
www.macep.org

Officers

Nathan MacDonald, MD, FACEP, President
Niels Rathlev, MD, FACEP, President-Elect
Peter Smulowitz, MD, FACEP, Secretary
Jeffrey Hopkins, MD, FACEP, Treasurer
Melisa Lai Becker, MD, FACEP, Member at Large
Gregory Volturo, MD, FACEP, Past-President

Board of Directors

Joseph Bergen, DO, FACEP
Laura Burke, MD
Jonathan Drake, MD, FACEP
James Feldman, MD, FACEP
Bradley Judson, MD, FACEP
George Kondylis, MD, FACEP
Luis Lobón, MD, FACEP
Jesse Rideout, MD, FACEP
James Sullivan, MD
Joseph Tennyson, MD, FACEP
Scott Weiner, MD, FACEP

Tanya Pearson, Executive Director
tpearson@macep.org

SAVE THE DATE!

MACEP Annual Meeting
Wednesday, May 7, 2014
MMS Conference Center
Waltham, MA

www.macep.org



Affiliated with the
American College of Emergency Physicians

President's Corner

Nathan MacDonald, MD, FACEP



At MACEP, advocacy is one of the most important things that we do and this year is no exception. Parity for behavioral health patients, regulations governing the use of the Massachusetts Prescription Monitoring Program, and protection for physicians providing EMTALA mandated care are just a few of the issues that are getting attention from MACEP on behalf of EDs, providers and patients.

For our behavioral health patients, MACEP members have continued to work statewide with various stakeholders developing solutions for the problem of boarding in emergency departments waiting for inpatient psychiatric care. This continues to be a challenging issue involving acute care hospitals, psychiatric facilities, crisis teams, the Department of Mental Health, payors (both public and private), and other advocacy groups. MACEP's focus continues to be a push for parity under EMTALA and for the streamlining or elimination of impediments such as pre-authorization requirements that may keep our patients from getting timely placement. Better bed tracking, more community based resources that prevent the need for evaluation in an emergency department, and the concept of a regional facility where treatment could begin while waiting for definitive placement are all intriguing possible pieces to this complex puzzle.

On another front, MACEP is working with the Department of Public Health as regulations are drafted related to the use of the Massachusetts Prescription Monitoring Program (PMP). Emergency physicians nationwide have been advocates and early adopters of PMPs as a valuable tool to help guide the prescription of opiates and other controlled substances. In Massachusetts, our legislature made use of the PMP mandatory before prescribing any schedule II medication for any patient in any setting. MACEP firmly believes in, and is advocating

PRESIDENT continued on page two

MACEP Legislative Update

Ronna Wallace, Legislative Consultant

MACEP CONTINUES PUSH FOR "DISASTER" BILL

H.1485, "An Act Relative to Emergency and Disaster Planning for Health Care Providers" came before the Joint Committee on Judiciary on October 22nd for public hearing. MACEP submitted written testimony in strong support for the bill, which was filed by Rep. Liz Malia (D-Jamaica Plain) on behalf of MACEP. Specifically, H.1485 would grant qualified civil immunity to physicians, nurses, and other healthcare professionals who provide emergency medical services, except in the case of willful or wanton misconduct or reckless disregard. The bill would also require that, in the situation of a governor declared emergency, or during other locally declared emergency situations, there would be a general waiver of liability of court or regulatory agency administrative sanctions against health care providers to ensure that providers are able to care for patients quickly without worry about liability concerns.

MACEP's testimony stated that by setting a higher standard for pursuing a lawsuit against EMTALA providers, H.1485 would benefit the public, emergency physicians, hospitals and Massachusetts emergency care system, in the following ways:

- Reduce the costly practice of defensive medicine by emergency physicians.
- Encourage specialists to provide needed services in a hospital environment, thus making such services available for emergency department patients.
- Enhance recruitment of physicians to hospitals in Massachusetts, thereby enhancing the availability of such emergency and specialist physicians to serve in the Commonwealth's EDs.

LEGISLATIVE continued on page two

for, regulations that reasonably exclude mandatory use of the PMP. Possible exclusions could include cases where the patients age, emergency condition, or anticipated short duration of prescription where use of the PMP would not add clinically relevant information. This would allow emergency physicians to continue to use the PMP in our EDs when indicated without placing unnecessary obstructions to caring for other patients.

This fall MACEP is also advocating for Bill H.1485 as it makes its way through the legislative process. This bill would grant qualified civil immunity to physicians, nurses, and other healthcare professionals who provide emergency medical services, except in the case of willful or wanton misconduct or reckless disregard. Furthermore, it would also require that, in the situation of a governor declared emergency, or during other locally declared emergency situations, there would be a general waiver of liability of court or regulatory agency administrative sanctions against health care providers to ensure that providers are able to care for patients quickly without worry about liability concerns. This bill is an important piece of potential legislation to help preserve access to emergency care and on-call specialists in emergency departments across our state. As the pool of specialists willing to be on-call for hospital EDs diminishes, reducing concerns of liability will be crucial in maintaining access to this critical resource for our patients.

As happens every October, your MACEP delegation made the trek to the National ACEP council meeting in Seattle and participated in two days of debate and discussion on resolutions that help to guide and inform the direction of your national organization. On topics ranging from tPA administration for stroke to medical student representation in ACEP to federal funding for disaster medicine research, your Massachusetts councilors were there to help shape the decisions on these critical national issues.

When matters arise that affect emergency departments in Massachusetts – and they will; MACEP will continue to advocate for emergency physicians and for the patients we serve. Your Board of Directors will continue to focus on the concerns of behavioral health parity, the prescription monitoring program regulations, and liability protection for emergency care as well as responding to new issues as they arise. We will continue to offer resources that make it easier for our membership to see what we are up to, and to participate in MACEP in new ways including via our new website (coming soon!) with more ways to interact with your fellow emergency physicians. We hope that you will participate – from attending a monthly meeting, to serving on a committee, or lending your voice when MACEP needs you to help us speak out for our specialty and for emergency care in our state. As advocates, our greatest asset is our numbers as we combine our voices - I hope you will all be advocates this year!



- Enable smoother operation of the Commonwealth's EMS system through availability and
- stabilization of emergency physicians and specialists available to hospital emergency departments.
- Reduce wait-time for patients needing emergency or specialist physician care through improving the availability of physicians at hospitals. Such improved availability of physicians will also reduce the number of medically necessary transfers between hospitals. This increased availability of prompt medical care will benefit patient care.
- Ensure that our first responders (i.e. emergency medicine professionals in and out of the hospital setting) are available in the event of a weapons of mass destruction event.

The Senate companion bill, S.1012 (Eldridge, D-Acton), is currently pending before the Public Health Committee. No hearing date has been released at this time.

AND IN OTHER LEGISLATIVE AND REGULATORY NEWS...

Under the leadership of **Gregory Volturo, MD, FACEP** immediate past president, MACEP continues to work closely with the Department of Public Health as a member of the Best Practices Work Group and on regulations to implement the new law requiring usage of the Prescription Monitoring Program when prescribing a schedule II or III narcotic to a patient for the first time. Draft regulations are expected to be released by the end of the year. A public hearing and comment period will follow.

Matthew Mostofi, DO, FACEP also a MACEP past president, is an active member of the state Mental Health Advisory Committee, under the leadership of Senator John F. Keenan, Senate Co-Chair and Representative Patricia A. Haddad, House Co-Chair. The purpose of the Advisory Committee is to arrange for and evaluate an independent analysis of the public and private behavioral health care services available to the residents of the commonwealth. An interim report produced by the Abt/TAC Consulting Group, was released in mid October and is currently under active review by the Advisory Committee. MACEP is proud to note that data from a recent study by Mark Pearlmuter, MD, FACEP was utilized in the report (Massachusetts College of Emergency Physicians, et al. 2013 unpublished). Dr. Pearlmuter's data was also cited in recent testimony submitted by MACEP to the Financial Services Committee in support of H.948, "An Act to Expand Coverage and Access to Behavioral Health Service" (Keenan, D-Quincy). H.948 would require health plans to ensure patient access to medically necessary behavioral health services, delivered in a timely fashion and consistent with the delivery of medical/surgical services.



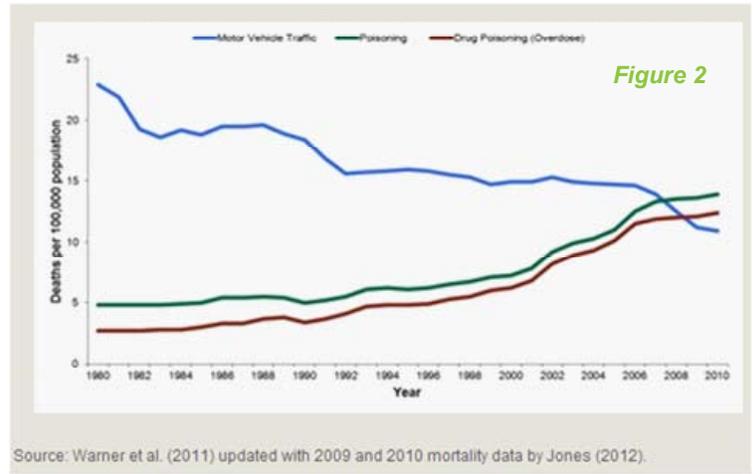
Public Health Committee Update

Scott Weiner, MD, FACEP, Co-Chair, Public Health Committee

On October 18, 2013, I attended the Prescription Monitoring Program (PMP) Advisory Council meeting at the Department of Public Health (DPH), representing MACEP. Joining me at that meeting was Ronna Wallace, MACEP's Legislative Consultant. This group, which is convened about once a year, is composed of multiple stakeholders throughout the state including multiple disciplines of medicine (including the Massachusetts Medical Society), pharmacists, law enforcement and researchers. DPH provides us with updates on the PMP that we can bring back to you, and we, in turn, provide them with additional feedback.

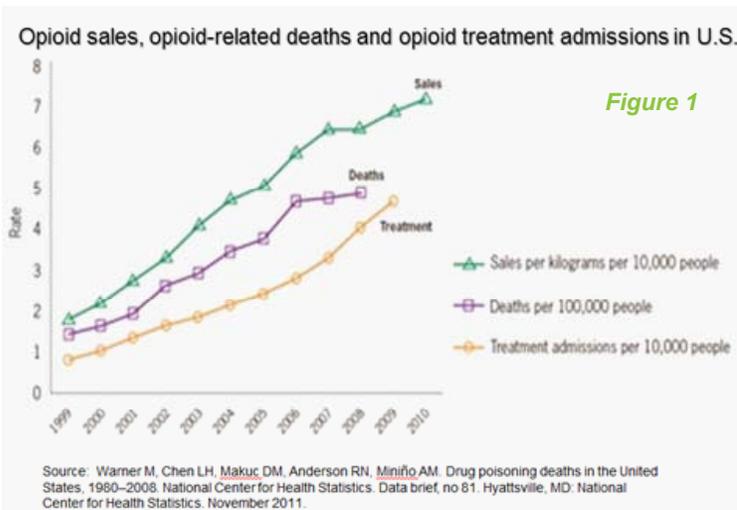
The beginning of the meeting was an overview of the regulations surrounding the PMP. Chapter 244 of the Acts of 2012 provided for automatic enrollment of providers. You may notice that when you renew your Massachusetts Controlled Substances Registration, you will now be automatically enrolled to have PMP access. Chapter 38 of the Acts of 2013 amended the utilization requirement, and specifically states:

“The department shall promulgate rules and regulations relative to the use of the prescription monitoring program by registered participants, which shall include requiring participants to utilize the prescription monitoring program prior to the issuance, to a patient for the first time, of a prescription for a narcotic drug that is contained in schedule II or III. The department may require participants to utilize the prescription monitoring program prior to the issuance, to a patient for the first time, of benzodiazepines or any other schedule IV or V prescription drug, which is commonly abused and may lead to physical or psychological dependence or which causes patients with a history of substance dependence to experience significant addictive symptoms. The regulations shall specify the circumstances under which such narcotics may be prescribed without first utilizing the prescription monitoring program.”

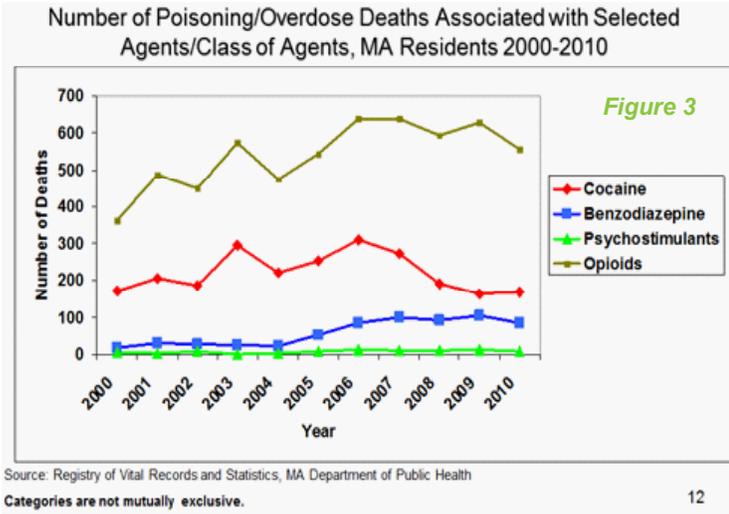


As you can see, with this new law from earlier this year, it is currently required that we use the PMP to access a patient's records prior to writing a prescription for schedule II or III medications (e.g. oxycodone, hydrocodone, hydromorphone). MACEP is opposed to this verbiage because we are concerned a) it may lead to under-treatment of pain when stronger medications are indicated because the provider does not want to take the time to access the PMP, b) the PMP is a useful tool but currently lacks adequate guidelines and evidence to demonstrate its efficacy and c) there are inherent deficiencies with the system, including a lag time (1-3 weeks) before prescriptions are recorded, resident prescriptions are listed as the actual hospital for which they work (not the individual) because they utilize the hospital's DEA number, and residents don't have access to the PMP, essentially making their prescribing of schedule II or III medications illegal! Until these issues are addressed, MACEP will continue to work with DPH on the circumstances under which these medications may be prescribed without first accessing the PMP.

Despite the above issues, it is clear that something must be done, and utilization of the PMP is likely to be one piece in the puzzle. We know that as sales of opioid pain relievers have increased over the years, so have opioid abuse treatment admissions and opioid-related deaths in parallel (Figure 1). Likewise, emergency physicians, in particular, should be aware that drug overdose deaths have recently overtaken motor vehicle traffic accidents as the leading cause of accidental death in the United States (Figure 2). In Massachusetts, opioid overdose remains the leading cause of overdose death (Figure 3). For every opioid death, it is estimated that there are 26 ED visits and a total of over \$4,000,000 in healthcare-related costs.



The Massachusetts PMP is continuing to evolve. The new system (version 3.0) is in the works. The first new feature is improved use of wildcards. If you haven't been doing this already, you should. You can insert the first two initials of the first name followed by an asterisks, and then the first five letters of the last name followed by an asterisks. For me, you would put in sc* weine*. This helps in situations



where people can use alternative first names (e.g. John, Jon, Jonathan) or have hyphenated last names. The second new feature, arriving in the next few months, is provider self-look-up. Clinicians will be able to see if patients are filling prescriptions not written by that provider. This will be an important tool to help law enforcement catch people who are forging prescriptions. Also arriving soon is batch look-up for multiple patients. This is helpful for the office practice setting where providers know the list of patients they will be seeing that day. Unfortunately, it does not help those of us in the ED much.

The good news, demonstrated at the meeting, is that evidence of “doctor-shopping” is declining since inception of the PMP. The rates of patients utilizing >=6 prescribers and >=6 pharmacies is decreasing over the past four years (down 33%). Other cut-offs of prescribers and pharmacies also demonstrated a decrease. A lot of promising data was shared at the meeting.

The best news of all, though, was that when DPH looked at physician enrollees and utilization stratified by specialty, Emergency Medicine was right at the top of the list. This is reassuring and extremely helpful, especially when we are attempting to argue that making use mandatory is onerous and not evidenced-based. So please do continue to use it whenever you think it is indicated. I'll provide more updates in this column once they are available. Also feel free to contact me at sweiner@massmed.org should you have any comments/questions/concerns that you'd like forwarded on to the DPH PMP staff.



Visit our website for more information about our volunteer opportunities, programs, upcoming events and more!
www.macep.org

Case Management: Atraumatic Spinal Cord Compression

Boston Medical Center, Department of Emergency Medicine
Cassidy Dahn, MD, Resident Author
Jasmine C. Mathews, MD, Resident Editor
Kalpana Narayan Shankar, MD, Faculty Reviewer

CC: Unsteady Gait.

HPI: 23-year-old male presented to the ED reporting a 2-week history of worsening bilateral leg weakness and difficulty walking. He sustained a football injury 2 weeks prior where he twisted his right ankle. Patient reports persistent ankle pain, that progressed to myalgias in bilateral lower extremities (LE). He reported feeling bilateral leg heaviness and numbness distal to his left knee. He also noted 2-4 episodes of diarrhea and voluntary fecal incontinence x 2-4 days secondary to ambulation difficulties. He denied fevers, head/neck trauma, neck pain, back pain, headache, vision changes, abdominal pain, vomiting, urinary incontinence, rashes, travel, sick contacts, preceding illness or prior neurologic deficits.

PMH: None, immunizations up to date.

Social: Denies tobacco, drugs. Occasional EtOH.

FH: Denies neurologic disease or malignancy.

Medications: Ibuprofen PRN ankle pain.

Allergies: None.

PHYSICAL EXAM

Vitals: T 97.9, BP 123/73, P 74, RR 18, 100% on RA

Gen: U-t.

HEENT: NC/AT. PERRL 4mm, reactive. EOMI. Supple neck. No meningismus.

Respiratory: Clear to auscultation bilaterally. Chest non-tender.

Cardiac: RRR, S1/S2, no murmurs.

Abdomen: Soft, non-tender.

Skin: No rashes, skin dry, normal color.

Neuro: A&Ox3. CN II – XII intact. 5/5 strength in bilateral upper extremities (UE); 4/5 strength in R ankle flexion/extension; L LE strength 5/5. 2+ UE reflexes, 4+ patellar and achilles reflexes with ankle clonus bilaterally. Diminished light touch sensation, L > R. FTN cerebellar testing intact. Wide-based, spastic, unsteady gait.

ED COURSE

Following examination, IV placed and labs sent including: complete blood count (CBC), basic metabolic panel, vitamin B12 levels, ESR and CRP. Although the differential remained broad, exam findings were concerning for neurologic pathology such as a spinal cord mass lesion versus intracranial mass or other peripheral neuropathy. An MRI brain and spine were obtained.

CASE MANAGEMENT continued on page five

STUDIES

Labs were unremarkable. CBC, metabolic panel, ESR, CRP and vitamin B12 levels were normal. MRI spine was significant for a T8 – T9 mass, T1 hypointense and T2 hyperintense, with significant cord compression and flattening from T7 to T9. Spine service was consulted, preoperative labs were obtained, and patient was admitted to their service.

HOSPITAL COURSE

The patient underwent an uncomplicated tumor resection and cord decompression on hospital day 2. His tumor pathology was consistent with schwannoma, a benign nerve sheath tumor. Post-resection, the patient began physical therapy and was discharged on hospital day 8 to an acute rehabilitation. At his two-month follow-up with Spine service, the patient had 5/5 strength of his UE and LE bilaterally with the exception of 4/5 dorsiflexion at the ankles bilaterally. His gait, previous parasthesias, and sensory deficits completely resolved. He continues to see physical therapy.

QUESTIONS

Spinal cord compression (SCC) results in thecal sac impingement often evident on radiographs but not necessarily clinically evident. Compression may lead to vasogenic edema, and cause spinal cord ischemia.¹ Non-traumatic SCC and cauda equina are caused by disc herniation, vertebral fractures, tumors, abscesses and hematomas. There are three different sites that can lead to SCC including intramedullary (within the cord itself), intradural-extramedullary (within the dura, but outside of the cord), and extradural (within the vertebral bodies). Regarding SCC, metastatic neoplasms are the most common extradural lesions, whereas nerve sheath tumors, as described above, are the most common intradural-extramedullary lesions.²

Literature describing non-traumatic SCC focuses on its different etiologies and their specific management. The purpose of this case is to focus on the initial presentation, diagnosis and management in an ED. It is important for the ED physician to have clinical suspicion, order appropriate testing, and initiate the appropriate management, or the morbidity may be severe.

What are the presenting symptoms and physical exam features of spinal cord compression?

Back pain is a common chief complaint in EDs throughout the United States. An estimated 5% of all chief complaints of adults aged 15-65 years is “back pain.”⁴ Only about 1% of patients with this complaint have disease related to cord compression.⁵ Deciphering which patients have cord compression based on symptoms and physical exam findings is very difficult even amongst spine specialists.⁶ The most common complaint among patients with SCC is back pain, however gait disturbance, weakness, paresthesias, urinary incontinence/retention, fever, bowel incontinence/retention, and weight loss should raise concern. Risk factors associated with SCC include: IV drug abuse, age > 50 years, history of cancer (e.g. breast, prostate, lung, lymphoma, myeloma, renal), prior surgical intervention, recent lumbar puncture, immunocompromise, and anticoagulation.^{5,6,7} In a 2011 study by Dugas, et al. of >1,200 patients from an urban ED, the most common symptoms of patients diagnosed with SCC included pain (70%), difficulty ambulating (60%), and weakness (56%).⁶ In a 2009 study looking at the predictive values of diagnosing cauda equina syndrome, having 2 of 3 of the following symptoms - bilateral sciatica, subjective urinary retention, or rectal symptoms - increased the likelihood of positive findings on MRI by 48 times.⁷

A complete neurologic examination is crucial when evaluating a person reporting back pain. Positive physical exam findings include: motor and sensory deficits, midline spinal tenderness, decreased rectal tone, saddle anesthesia, spastic tone, proprioceptive abnormalities, abnormal gait, and urinary retention. Motor abnormalities often follow a pattern of weakness, ataxia, and ultimately, paralysis.¹ In the Dugas study, positive physical exams noted motor deficits more often than sensory deficits (71% vs. 43%).⁶ Gait assessment is an essential component of a complete neurologic examination. This may be the only abnormal finding, and when abnormal, should greatly increase suspicion for spinal cord disease. Reflexes may help determine lesion location, as hyperreflexia often exists distal to the lesion. The absence of any findings on physical exam, however, does not rule out the diagnosis.

In most cases, other organ systems are unaffected in SCC and therefore patients are unlikely to have any further symptoms or exam findings. However, metastatic SCC may require further evaluation if the clinical presentation warrants exploration.

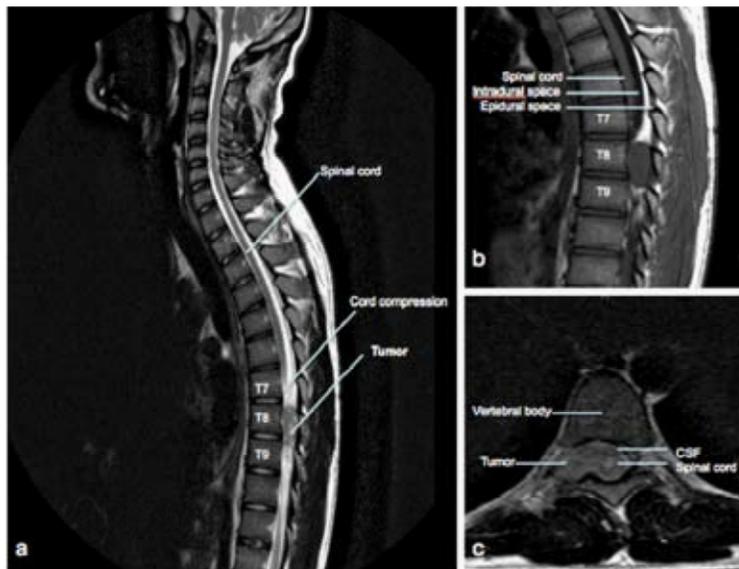


Figure 1. MRI Spine: a. T1 longitudinal view; b. T2 longitudinal view; c. T1 transverse view

What testing should be performed to diagnose spinal cord compression? While history or exam findings may raise suspicion for the diagnosis, imaging is required for confirmation. Lab results like CBC, metabolic panel, coagulation studies, ESR and CRP may be obtained depending on the case, but will not be overly helpful in the diagnosis. Sensitivity for ESR and CRP in infectious etiologies such as abscesses or osteomyelitis to rule out cord compression ranges from 76 to 95% and 82 to 98%, respectively. ESR is approximately 80% sensitive to detect neoplasms.⁵

The gold standard for the diagnosis of SCC is an MRI with gadolinium. This is a non-invasive imaging modality with a sensitivity of 93% and specificity of greater than 97%.¹ If there are clear symptoms noted, an MRI from two spinal segments above the deficit down to the conus can be obtained, but most often an MRI of the entire spine is recommended. Full spinal imaging is especially important, time-sensitive and cost-effective in the diagnosis of spinal metastases, as 1/3 of patients with epidural SCC will have multiple sites of epidural metastases.⁹ Delay to treatment or surgical intervention of SCC due to malignancy or epidural abscess leads to worse outcomes.^{1, 10}

There are no clinical guidelines regarding the decision to pursue MRI and unfortunately, the positive predictive value of MRI modality varies widely depending on the clinical indication. A 2009 study demonstrated that 76% of all urgent MRI requests showed significant cord compression. The indication for MRI in this study included: paraplegia, tetraplegia, limb weakness, numbness and/or sphincter disturbance.¹¹ In contrast, a larger 2011 study looked at the rate of positive MRI findings to evaluate for epidural abscesses (regardless of exam findings). Of the 106 MRIs obtained, only seven had positive results (7%) and of those, five of the seven would have shown abnormalities on CT.¹² Despite these mixed results, MRI is still the imaging modality of choice and is generally the preferred modality requested by most spine specialists.

In the scenario that a patient is ineligible for emergent MRI or an MRI, CT myelography may be obtained as a second modality with sensitivity and specificity approaching 95% for diagnosing SCC.^{1,2} However, this imaging modality is not preferred as it is invasive, requiring a lumbar puncture for injection of contrast into the spinal canal. Furthermore, CT myelography is less helpful to decipher the degree of cord injury and the anatomy proximal to the obstructive lesion. Plain radiography cannot rule out SCC. Even in patients with vertebral collapse from metastatic SCC, plain radiography is only 75% sensitive.¹

What is the appropriate management for spinal cord compression? Once SCC is diagnosed, management varies depending on the etiology. The majority will require surgical intervention for decompression. Radiotherapy may

be used for some malignant etiology but such decisions should be left to the spine specialists evaluating the patient. Disposition will include admission, frequent neurological assessments, and definitive treatment. For epidural abscesses, antimicrobial therapy should begin as early as possible. CT guided drainage to obtain cultures are done on occasion, but remain negative in 20-40% of cases.² The majority of infections are *Staphylococcus aureus*, so antibiotic treatment with vancomycin is recommended. If there is concern for gram-negative pathogens, i.e. a recent neurosurgical procedure, then a third generation cephalosporin and aminoglycoside should be added.

Is there any role for steroids in the acute management of spinal cord compression? In addition to surgical intervention, there is some evidence to support the use of steroids for certain etiologies of SCC. The benefit of corticosteroids in the treatment of SCC is based on the concept that inflammation within and surrounding the cord is reduced and therefore the neurological sequelae and pain are also reduced. Class II evidence supports steroid use in the management of metastatic disease to the spine with cord compression. High dose corticosteroids should be administered in the ED for patients with myelopathy or abnormal neurologic findings (100mg IV bolus dexamethasone, halving the total dose every 3 days until stable) and low dose for patients with only radiologic evidence (10 mg IV bolus dexamethasone with 4 mg IV doses daily, tapered over 2 weeks).¹ Steroids have not been shown to have any change in mortality, however, there has been improvement in ambulation after treatment.²

In March 2013, the American Academy of Neurological Surgeons and the Congress of Neurologic Surgeons put forth a level I recommendation data against the use of methylprednisolone for acute spinal cord injury secondary to trauma. There is class I, II, and III level evidence indicating a higher incidence of infection, sepsis, complications, longer ICU stay and death with steroid use.^{13, 14} For all other etiologies of spinal cord compression, the efficacy of systemic steroids varies and should be discussed with the spine specialists before the administration.

What are the outcomes after treatment? The outcomes following treatment of SCC vary widely depending on the clinical presentation. The patient's initial neurologic condition is the most important prognostic factor for neurologic status after treatment.¹ A second prognostic factor is time to diagnosis and treatment initiation. A 2004 study of epidural abscess with SCC noted residual motor weakness in 45% of patients with a delay in diagnosis (greater than 24 hours) versus 13% without delay. Early diagnosis of SCC is key.¹⁰ Prognosis also varies considerably depending on the etiology of SCC. For nerve sheath tumors, such as schwannomas, there is little to no morbidity. In contrast, metastatic SCC, has up to a 1 year survival rate of 30% depending on the primary site of malignancy.^{1, 15, 16}

SUMMARY

Non-traumatic SCC is caused by multiple pathologies including inflammatory, infectious, and neoplastic. This may cause significant morbidity and mortality, especially when there is a delay in diagnosis. The varied symptoms and physical exam findings make the diagnosis of SCC very difficult. MRI with gadolinium is the gold standard for diagnosis of SCC. Surgical intervention is commonly the mainstay treatment, and steroids may be used adjunctively in certain cases. Morbidity, mortality and outcome vary widely depending on the initial clinical presentation and underlying etiology of the SCC.

REFERENCES

1. McCurdy MT, Mitarai T, and Perkins J. Oncologic Emergencies, Part I: Spinal Cord Compression, Superior Vena Cava Syndrome, and Pericardial Effusion. *EBMedicine*. Feb 2010; 12 (2): 1 – 6.
2. O'Phelan K, Weingart S. Emergency Neurological Life Support: Spinal Cord Compression (SCC). *Neurocrit Care*. 2012; 17: 96 – 101.
3. Welch W, Schiff D, Gerszten P. Spinal Cord Tumors. *UpToDate*. Jul 5 2013. Accessed on: Aug 15 2013. <http://www.uptodate.com/contents/spinal-cord-tumors>.
4. Nishka R, Bhuiya F and Xu J. National Hospital Ambulatory Medical Care Survey: 2007 Emergency Department Summary. *National Health Statistics Reports*. 2010; 26: 1 -32.
5. Pope J, Edlow J, Avoiding Misdiagnosis in Patients with Neurological Emergencies. *Emergency Medicine International*. 2012; 1 – 10.
6. Dugas, AF, Lucas, JM and Edlow, JA. Diagnosis of Spinal Cord Compression in Non Trauma Patients in the Emergency Department. *Academic Emergency Medicine*. 2011; 18: 719–725.
7. Domen PM, Hofman PA, Santbrink HV, and Weber W. Predictive value of clinical characteristics in patients with suspected cauda equina syndrome. *European Journal of Neurology*. 2009; 16 (3): 416–419.
8. Karp SJ, Ho RT. Gait Ataxia as a Presenting Symptom of Malignant Epidural Spinal Cord Compression. *Postgrad Med J*. 1986; 62:45- 47.
9. Jordan JE, Donaldson SS, Enzmann DR. Cost effectiveness and outcome re-assessment of magnetic resonance imaging in diagnosing cord compression. *Cancer*. 1995; 75(10): 2579 – 86.
10. Davis DP, Wold RM, Patel RJ, et al. The Clinical Presentation and Impact of Diagnostic Delays on Emergency Department Patient with Spinal Epidural Abscess. *J Emerg Med*. 2004; 26: 285 -291.
11. Wong Cs, Chu Y, Ma KFJ, and Cheng LF. An Appraisal of Timely Magnetic Resonance Imaging in Diagnosing Spinal Cord Compression. *Singapore Med J*. 2009; 50(9): 894- 896.
12. Sayed M, Witting MD. Low yield of ED magnetic resonance imaging for suspected epidural abscess. *American Journal of Emergency Medicine*. 2011; 29 (9): 978–982
13. Resnick DK. Updated guidelines for the management of acute cervical spine and spinal cord injuries. *Neurosurgery* 2013 Mar; 72:1.
14. Koenig KL. New Neurosurgical Guidelines Warn of Harm from Steroids in Acute Spinal Injury. *NEJM Journal Watch*. Apr 2013. Accessed Oct 9 2013. <http://www.jwatch.org/em201304120000001/2013/04/12/new-neurosurgical-guidelines-warn-harm-steroids>.
15. Bilsky M. Intradural Nerve Sheath Tumors. *UpToDate*. May 24 2013. Accessed Aug 24 2013. www.uptodate.com/content/intradural-nerve-sheath-tumors/.
16. Prasad D, Schiff D. Malignant spinal-cord compression. *Lancet*. 2005; 6: 15 – 24.
17. Weurmser L, Ho CH, Chiodo AE, Priebe MM, Kirshblum SC, and Scelza WM. Spinal Cord Injury Medicine. 2. Acute Care Management of Traumatic and Nontraumatic Cord Injury. *Arch Phys Med Rehabil*. 2007; 88(1):55 – 61.



MACEP Medical Student of the Year Award

In 2013 MACEP introduced a new award – Medical Student of the Year. The intent of the award is to recognize outstanding medical students who excel in compassionate care of patients, professional behavior, and service to the community and/or Emergency Medicine.

MACEP's 2013 Medical Student of the Year award was presented to **Joshua Feblowitz** from Harvard Medical School.

Preceding medical school, Joshua volunteered extensively on the patient wards at Children's Hospital Boston. He has excelled in his Patient-Doctor courses at HMS, and these weekly sessions spent interviewing hospitalized patients are the highlight of his week. Throughout his first two years of medical school he has logged innumerable hours in the EDs at Beth Israel Deaconess Medical Center (BIDMC), Brigham and Women's Hospital, and Children's Hospital Boston. He has an exemplary bedside manner, communicating with patients in a professional, compassionate and comprehensible manner. Within minutes, Joshua is able to put patients at ease and gain their trust; a critical skill for a budding emergency physician.

Joshua is being recognized as he is in the early stages of what is certain to be an impressive career in Emergency Medicine. He has accomplished more in the past two years than most medical students accomplish over four years.



MACEP President Nathan MacDonald, MD (L) presenting the Medical Student of the Year Award to Joshua Feblowitz (R) at the September 24 MACEP Board Meeting.

Massachusetts Emergency Medicine Action Fund (MEMPAC)

Right now, lawmakers and government officials, not trained in medicine, are making decisions on legislation that may affect our specialty and how we provide our patients' care. It is important that emergency physicians continue to band together and aggressively continue the role of patient advocates.

The most effective way we have to participate in our state's legislative agenda; to reach legislators and candidates to make them aware of the needs of our patients and our specialty; the way to be sure our issues receive a proper legislative recognition is through the Massachusetts Emergency Medicine Political Action Committee (MEMPAC). MEMPAC is an effective tool that allows Emergency Medicines' concerns to be heard by candidates for state legislative offices.

MEMPAC makes a careful study of the issues, researches the voting records of incumbents, and reviews the qualifications and expressed opinions of hopefuls before deciding who will receive donations in support of their campaigns.

Emergency Physicians in Massachusetts have made great strides in the last few years by educating state legislators regarding cost control, medical liability reform, overcrowding and diversion, preparedness and many others that impact everyone in the commonwealth in some way, at some time.

The Massachusetts Emergency Medicine Political Action Committee (MEMPAC) is an effective and efficient way to help us communicate our views to legislators. Help assure that MEMPAC will be able to impact on the important legislative issues that affect you and your patients. It is imperative that they hear what you have to say – that they hear the voice of emergency physicians loud and clear. Please consider making a donation today. Donations can be made at www.macep.org.

...

Physician Focus: Inside the ER

Massachusetts Medical Society TV Interview with Nathan MacDonald, MD and Jeff Hopkins, MD

Here is the link to the 30 minute recorded segment http://www.massmed.org/News-and-Publications/Physician-Focus/Physician-Focus--Inside-the-ER/#.Unfi_Dgo6Uk.

MACEP Congratulates New Fellows!

Thomas Evans, MD, FACEP
Brian Hession, MD, FACEP
Brad Judson, MD, FACEP
Andrew H. Koslow, MD, JD, FACEP
Adam Landman, MD, FACEP
Moon O. Lee, MD, FACEP
Craig Luigi Longo, MD, FACEP
Everett Lyn, MD, FACEP
David Aram Meguerdichian, MD, FACEP
Jeffrey Randazza, MD, FACEP
Christopher W. Russell, MD, FACEP
Gabriel Simon, MD, FACEP
Michael Stone, MD, FACEP

MACEP Awards Program - 2014

MACEP is accepting nominations for the following awards: Pinnacle Award, Vanguard Award, EM Physician of the Year, EM Resident of the Year and Medical Student of the year. Award Recipients will be recognized.

The deadline for receipt of nominations for these awards is March 14, 2014. Please visit our website (www.macep.org) to obtain a copy of the official nomination form to be sent with a brief biographical statement about the nominee as well as a current CV.

...

Call for Board of Directors Nominations

All active members of the Massachusetts College of Emergency Physicians interested in serving on the Board of Directors are encouraged to submit their names to the 2014 Board Nominating Committee for consideration as the Committee develops the slate of candidates. New Board members will be selected at the MACEP Annual Meeting on May 7, 2014.

Those interested in Board service should email their notice of intention to the Chapter office tpearson@macep.org no later than March 14, 2013.

Please include with your notice a brief biographical sketch, a copy of your curriculum vitae and your preferred contact information.

...

Sued for Malpractice? You are not alone!... and, you could help others

Louise B. Andrew, MD, JD, FACEP

The ACEP Medical-Legal Committee all member survey conducted in 2010¹ suggested that the majority of emergency physician members had been named in a claim for malpractice at least once. Almost 10% of survey respondents had been named five or more times. Of cases litigated, over 85% of cases resulted in a defense verdict. However, 40% of respondents reported that some payment was made on their behalf in one or more claims.

A 2012 study of closed claims involving all specialties covered by a nationwide malpractice insurer revealed that emergency physicians received just over the average number of claims for all specialties; and was just under the average for all specialties in the percentage of physicians making payouts on claims. Average payment was approximately \$175,000.² Average duration of claims against physicians ranges from 11 months to 43 months.

In the ACEP Medical Legal Survey, fully 60% of sued respondents reported that they had experienced litigation stress. Few felt that they had any preparation or education in dealing with the stress. Considering the duration of most claims, lost productivity and diminished life satisfaction while a case is ongoing, the costs are far beyond monetary.

The stress of ongoing or impending malpractice claims can prompt a variety of intrusive feelings. Physicians undergoing litigation stress often feel isolation and sadness or irritability and anger, disbelief, a sense of betrayal or of being unjustly singled out. They may experience denial, anxiety, insomnia, inertia, or depression which can be low level or occasionally debilitating. The onset or exacerbation of physical illness, including gastrointestinal or cardiac symptoms is not uncommon but is often ascribed to tension, and therefore medical evaluation is typically delayed. Self treatment is common.

Litigation or medical malpractice stress also typically causes significant immediate changes in practice patterns, nearly all of which are deleterious to good practice and to patient relationships. Sued physicians emotionally distance themselves from patients, whom they may begin to view as potential future litigants. They become less confident in their capabilities, second guessing diagnoses, calling for more consultations, requiring more confirmatory lab tests, and admitting or transferring patients more liberally. They become much more obsessive in record keeping, which could be viewed as protective except that this often comes at the cost of effectively communicating with patients. It has been shown that physicians who have recently received claims may be more vulnerable to subsequent claims.

Physician litigation stress also can result in long range changes, especially if the physician already suffers from an emotional deficit or is sued early or multiple times over a career. Such physicians are more likely to consider changing practice locations or medical specialty, to consider retiring early, or changing careers altogether to something less stressful. In the worst cases, disability or even suicide may emerge as a result of medical malpractice stress.

There are a variety of approaches to dealing with the stress of litigation. The most important, after taking steps to insure a defense team is in place, is to identify all personal sources of support and renewal. For example, sharing the fact of the lawsuit with spouse, counselor or clergy provides a protected mechanism for offloading the feelings engendered by the case, and is also a way of getting valuable feedback on how you are coping. Sharing is also possible with sympathetic colleagues, as long as the facts of the case and identifying information is not divulged. Contact with a peer who has “been there” and survived, can be life and career affirming. Educating yourself about the legal process, mastering the details and learning the legal strategies involved in your case, and practicing successful approaches to stress can begin to restore a sense of control over the situation (litigation) which is otherwise so alien to our sensibilities and daily operations as physicians and healers.

Last year, a multi-committee collaboration was created within ACEP to address malpractice litigation stress. The Medical-Legal, Well-being, and Academic Affairs committees have been assigned to develop educational materials and resources on litigation stress and establish a network of member peer counselors. If you have suggestions of resources on litigation stress management, or if you have experienced litigation and are interested in serving as a peer counselor in the Peer to Peer Counseling program, please contact the author or Marilyn Bromley, ACEPs Director of Practice Management. More volunteers will make this a stronger program. And if you are personally experiencing litigation stress, please be assured that you are not alone. You have many colleagues who have survived the experience and who will gladly share coping techniques and strategies with you. ACEPs volunteer member peer support program is available to any member who is experiencing litigation related stress. Please contact Marilyn Bromley (mbromley@acep.org) or call 800.798.1822, ext 3234.

Dr. Andrew is a senior member of the Medical-Legal Committee, past and present chair of the Well-being Committee, and a medical malpractice litigation stress educator and counselor. She can be contacted at acep@mdmentor.com.

REFERENCES

1. Andrew LB. ACEP Member Medical-Legal Survey Results. ACEP News. March 2012.
2. Jena AB, Seabury S, Lakdawalla D, et al. Malpractice risk according to physician specialty. *N Engl J Med*. 2011; 365(7):629-36.



Resident Grant Recipient Summaries

To highlight the quality of the research MACEP funded last year, we asked 2012-2013 resident grant recipients to provide a summary of their research projects.

Comparison of Advanced Airway Management Techniques by Tactical EMS Providers in a Simulated Tactical Setting

Brian Yun MD, MBA, BWH/MGH HAEMR

While optical and video laryngoscopy has been studied in the ED, the operating room, and the routine prehospital setting, their efficacy in the tactical environment, in which operator safety is as important as intubation success, has not been defined. This study compared direct laryngoscopes (DL) to optical (AirTraq™) and video (King Vision™) laryngoscopes (VL) in terms of intubation success and the vertical exposure of the intubator in a simulated tactical setting.

We conducted a prospective IRB-approved simulation study that evaluated each of the laryngoscopes in the hands of seven tactical paramedics. After a one-hour training session, each tactical paramedic used each of the laryngoscopes in a random order on each of four different airway manikins. A tactical environment was simulated using auditory and visual immersion (sounds of gunfire in a dark room) and the intubations occurred on the floor with the paramedics in full tactical gear. Outcomes included time to successful ventilation (confirmed through visualization of endotracheal tube insertion using real-time retrograde bronchoscopy), number of attempts, best Cormack-Lehane (C-L) grade, and maximum intubator head height during the intubation.

A total of 84 intubations were performed by the seven tactical paramedics (two women and five men) who, on average, were 41 years old, 68 inches tall, weighed 186lbs, had 18 years of clinical experience, and had 8 years of tactical experience. While there were no significant differences in time to successful ventilation or number of attempts, the optical and video laryngoscopes had significantly better C-L grades, and direct laryngoscopy resulted in significantly less maximum vertical exposure of the intubator (Table). Multivariate regression demonstrated that improved C-L grades were dependent on both device type and greater clinical experience and that less vertical intubator exposure was dependent on device type, lower age, less height, greater weight, and less tactical experience.

We found that video and optically enhanced laryngoscopes can be used successfully in a simulated tactical setting. The King Vision™ and AirTraq™ resulted in improved C-L glottic views yet similar times to ventilation and first pass success compared to direct laryngoscopy. Intubator head height was lower with DL, but is dependent on a number of other demographic factors. Clarifying VL's role in a tactical environment, especially in the hands of less experienced intubators, requires further research.

Shared Decision Making in the Workup of Pulmonary Embolism in the ED

Brian Geyer, MD, BWH/MGH HAEMR

The use of contrast-enhanced CTPA has increased dramatically in recent years. It is now estimated that 1.5% of all ED patients undergo CTPA for suspected PE, however, less than 10% of all CTPA studies confirm this diagnosis. CTPA, while sensitive and specific for pulmonary embolus, is not without consequence. Estimates suggest that for every 300 CT scans performed, patients will develop one additional malignancy. Furthermore, a recent study demonstrated that the likelihood of inducing contrast-induced nephropathy is at least as great as discovering a pulmonary embolus with CTPA.

Patients with low probability for PE are often initially assessed with a serum D-dimer. While highly sensitive, the specificity of D-dimer for PE is low (43.6% in our previous work). Furthermore, there is a predictable loss of specificity, ranging from 63.5% for patients in the third decade of life to 17.0% after the seventh decade of life. We have previously shown that using a variable D-dimer cutoff, based on the patient's prior probability of PE, can reduce the number of CT scans performed with no significant decrease in the negative predictive value of the D-dimer assay. We found that varying the D-dimer threshold increases the specificity to 75% while decreasing the sensitivity to 88%, and would allow clinicians to avoid 40-50 CT scans per PE 'missed.' A follow up study conducted by another group found that >90% of PE 'missed' using this strategy would be small, segmental or subsegmental, and none of the patients would have residual deep vein thrombosis that would put patients at risk for a second PE.

My colleagues and I were able to conduct a study as an initial attempt towards reducing CTPA in cases where patients are unlikely to benefit. At the end of the study, we enrolled 203 ED patients. Mean age was 55 ±17 years and 61% were male. Seventy-four (37%) patients elected to defer CT-PA testing in our hypothetical scenario. Patients with a previous PE diagnosis were significantly less likely to defer CT-PA testing. There was no association between the decision to defer testing and age, gender, family history of PE or self-assessed risk-taking tendency. As a result of this study, we concluded that when presented with a hypothetical scenario, more than one third of patients deferred imaging for PE based on low clinical probability and a D-dimer less than twice the normal threshold. Thus a shared decision making approach is acceptable to patients and may decrease imaging for PE.

This work provides initial evidence that shared decision-making is a viable approach to reducing unnecessary testing for PE in the ED. We plan to extend this study by employing this approach in patients being evaluated for PE and following both their subjective and clinical outcomes.



Pediatric Emergency Medicine State of the Art

March 27 & 28, 2014

DoubleTree Suites by Hilton
Boston, Massachusetts



This course in Pediatric Emergency Medicine is:

- **Intended for**
 - Emergency Physicians
 - Pediatric Emergency Physicians
 - Acute Care Pediatricians
- **Focused on** recent updates and cutting edge Pediatric Emergency Medicine
- **Presented by** Emergency Medicine faculty of Boston Children's Hospital and Harvard Medical School with national recognition for their expertise
- **Emphasizes**
 - Both clinical and academic aspects of Pediatric Emergency Medicine
 - Small group interactions
 - High faculty contact with participants
 - Specialized workshops and practical skill sessions

Keynote Speaker

Gary R. Fleisher, MD
Pediatrician-in-Chief and Chairman
Department of Medicine
Boston Children's Hospital

Course Topics

- Ultrasound in PEM
- Procedural Sedation and Analgesia
- Infectious Emergencies
- Pediatric Toxicology
- Diagnostic Imaging in Trauma
- Advances in Asthma Management
- Evaluation of the Acutely Injured Athlete
- Evidence Based Guideline Review
- Journal Review

Educational Approaches

- Didactics
- Small group discussions
- Hands-on skills training
- Simulation
- Case studies



macep



MASSACHUSETTS COLLEGE OF EMERGENCY PHYSICIANS

Calendar of Events

2013-14

November 22, 2013

Annual Reimbursement & Coding Course
MMS Conference Center
Waltham, MA
7:30 AM - 3:30 PM

November 26, 2013

MACEP Monthly Meeting
Marriott Courtyard Hotel
Marlboro, MA
4:30 - 6:30 PM

January 28, 2014

MACEP Monthly Meeting
Marriott Courtyard Hotel
Marlboro, MA
4:30 - 6:30 PM

February 25, 2014

MACEP Monthly Meeting
Marriott Courtyard Hotel
Marlboro, MA
4:30 - 6:30 PM

April 7, 2014

Dousing the Flames of Emergency
Medicine Burnout
MMS Conference Center
Waltham, MA
7:30 AM - 3:30 PM

May 7, 2014

MACEP Annual Meeting
MMS Conference Center
Waltham, MA
7:30 AM - 2:00 PM

For more information, about any of these upcoming events, call MACEP at (781) 890-4407 or visit our website at www.macep.org.