

New Hampshire Chapter GOVERNOR'S NEWSLETTER

ACP
AMERICAN COLLEGE OF PHYSICIANS
INTERNAL MEDICINE | *Doctors for Adults*

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Governor, New Hampshire Chapter

TRANSITION



My four years as the ACP Governor are winding down. For several months I have been meeting with Governor-Elect **Dana Merrithew**; the transition will be smooth, and I am certain that the next four years will see improved organization and expanded opportunities and programs for the NH Chapter.

I must say that my major involvement with the ACP has been a professional highlight of my 30 year career here in New Hampshire; I encourage all of you to stay active in the organization and to consider being on the Council and perhaps taking on a leadership position.

COUNCIL OF NH ACP CHAPTER

The members of the Council also include **Lin Brown** and **Elaine Silverman** of Lebanon, **Dana Merrithew** of Rumney, **Dick LaFleur** of Derry, **Mark Brickman** of Littleton, Bill Palmer of Cornish, **Peter Walkley** of Laconia, and **Harry Ward** of Nashua. Associate members include **Ryan Berger**, **Lisa Pastel**, and **Sara Scott**, all of Lebanon. Our next council meet will be held on **Thursday, February 16th in Concord**.

MEDICAL STUDENT ACTIVITIES

ACP was host to first and second year medical students at Jesse's restaurant in Hanover on Tuesday, Oct. 19th. It was a lovely reception and dinner with nearly 40 medical students, 10 DMS/DHMC faculty, and 7 community physicians in attendance.

Chuck McGraw and **Andrea Russo**, both first year medical students are heading up the group this year.

The third IMIG (Internal Medicine Interest Group) activity was held February 2nd at DMS, at which two practicing Internists shared with the first and second year students some of the aspects of our practices and our lives as Internists

CHAPTER EXCELLENCE AWARD

We are pleased that the NH Chapter has again been honored with the Chapter Excellence Award.

ASSOCIATE ACTIVITIES

We are pleased that all residents of Internal Medicine at DHMC are now Associate Members of ACP. The Department of Medicine and the NH ACP Chapter each contribute half of the membership fee for the Associates. The Dept. of Medicine has been very supportive of all Chapter Activities, and the Associates played a very important role in our October '05 meeting with their excellent oral and poster presentations.

RECENT SCIENTIFIC MEETING

Our very successful meeting was held on Oct. 14th, 2005 at the Courtyard Marriott (Grappone Convention Center) in Concord. In addition to faculty, forty-six physicians attended the one-day meeting. The program committee came up with an excellent group of speakers, mostly from Dartmouth, and the personal feedback from the attendees was exceedingly positive. Three former ACP governors were in attendance and they all described it as one of the best state meetings ever. The centrally located facility worked out well, and we have reserved Concord Courtyard Marriott for next year's meeting.

COLLEGE ADVOCACY

On February 1st Congress voted to extend 2005 Medicare physician payment rates through 2006. The President is expected to sign the bill into law in the coming week. 2006 Medicare physician payment and claims processing questions and answers are now available at: http://www.acponline.org/college/misc/06med_pay.htm?hp.

LEADERSHIP DAY

On **May 16th and 17th**, a limited number of NH ACP physicians will have the opportunity to travel to Washington, D.C. The first of the two days includes a series of lectures and discussion on the Advocacy issues affecting the College and political, economic, and practical aspects of the practice of medicine. Then on Wednesday, May 17th, we will be meeting with our Senators and Representatives and/or their senior staff to review with them our agenda. For these last three years the Chapter has funded four physicians to attend this year, and we plan to do the same for the upcoming meeting. IF you are interested in participating, please notify Bob Englund.

NEW FELLOWS

Congratulations to **Greg Neilley** of Peterborough who has been awarded ACP Fellowship. The applications to two other New Hampshire Internists are currently being reviewed. Thus we anticipate three additional New Hampshire Fellows to be recognized at the upcoming Annual Session.

DATES FOR YOUR CALENDARS

April 6th-8th, 2006: Annual Session in Philadelphia. Note that a series of pre-course clinical sessions will be held on April 5th and 6th. Note also that there will be a reception sponsored by the UVM Alumni Association on Friday, April 7th, and that all ACP physicians from Maine, New Hampshire, and Vermont are invited to attend that meeting.

Friday, Oct. 13th, 2006: NH ACP Chapter Scientific Meeting will again be held at the Courtyard Marriott (Grappone Convention Center) in Concord.

SUMMARIES OF ASSOCIATE PRESENTATIONS FROM '05 STATE SCIENTIFIC MEETING

Included below are the summaries prepared by Associate ACP Members (residents in Internal Medicine at DHMC.) Having listened to the presentations of the first four presenters and reviewed the poster presentations of the others, I realize that a great deal of work went into the preparation of these vignettes and I urge you to review these excellent summaries.

LEMIERRE'S DISEASE by Dr. Cocav Engman:

Ms. B is a 25 year old, previously healthy woman, who presented to her local emergency room with one day of throat pain, ear pain, and fevers. After her rapid strep test returned negative, she was discharged home with a diagnosis of a viral syndrome, and a prescription for ibuprofen. She had progressive fevers to 40 degrees Celsius then developed nausea, vomiting, diarrhea, respirophasic right upper quadrant pain, and dysphagia. She was subsequently admitted to her local hospital for further work-up and treatment. Her admission chest radiograph showed a possible right lower lobe infiltrate. Blood cultures grew out gram negative rods and Streptococci, and patient was given penicillin, ceftazidime, and gentamicin. The patient developed mild hemoptysis as well as worsening dyspnea, right-sided chest pain, and jaw stiffness in addition to her throat pain. Her throat pain and possible trismus elicited concern over a peritonsillar abscess, and she was referred to Dartmouth Hitchcock Medical Center for evaluation by an otolaryngologist. No evidence of tonsillar abscess was found, but computed tomography of her chest revealed a large right-sided empyema and several cavitating lung lesions. A cardiac echo was emergently performed to rule out right-sided endocarditis, but no valvular pathology was found. At this time, blood cultures from the outside hospital grew out *Fusobacterium necrophorum* and *Streptococcus milleri*. Considering the constellation of symptoms, microbiology, and CT scan findings, the medical team was suspicious of Septic Thrombophlebitis or Lemierre's Disease. To confirm the diagnosis duplex ultrasonography of her neck veins was performed and showed a non-occlusive thrombus in her right internal jugular vein.

The patient was continued on penicillin monotherapy and her empyema was drained with a thoracostomy tube. Her dyspnea and fevers resolved and she was discharged to complete 4 weeks of intravenous penicillin with subsequent resolution of her disease. Her follow up blood cultures remained negative, and her repeat vascular duplex showed no residual thrombus.

Discussion:

Modern medical care frequently requires central venous and peripherally inserted central catheters for hemodialysis, chemotherapy, antibiotics, and total parenteral nutrition. This has resulted in an increased rate of catheter-associated infections. A less common but potentially life-threatening complication of these infections is Suppurative (or Septic)

Thrombophlebitis. These infections involve inflammation and suppuration of the vessel wall and typically occur in the subclavian vein and superior vena cava. A central venous catheter is usually implicated as the nidus of these infections. Rarely, the jugular vein has this disease entity occur within it. When this occurs, it is less commonly associated with catheters but rather with direct extension of tonsillar or pharyngeal infections. Symptoms of jugular septic thrombophlebitis include sore throat, neck pain, and fevers, often followed by shortness of breath as the disease metastasizes to the lungs. Diagnosis is made by persistently positive blood cultures, CT of neck and chest, and vascular duplex. Potential complications of this phenomenon include metastatic septic emboli and their sequelae (empyema, abscess, pulmonary emboli.) Treatment is with antibiotics aimed at the causative organisms and drainage of abscesses. These are typically members of the oral flora and include *Fusobacteria*, *Streptococcus*, *Eikenella*, and *Bacteroides*. Occasionally surgical exploration of the vessel may be required. Anticoagulation therapy is controversial at this time. While this disease is potentially life-threatening, rapid diagnosis and treatment can yield excellent outcomes

ZINC TOXICITY CAUSING COPPER DEFICIENCY, by Dr. Lisa Pastel

A 46 y.o. male is noted to be neutropenic and anemic during routine follow up. He denied current or recent infections, fevers, fatigue, or dyspnea. His past medical history was complicated by a gastric bypass four years prior, complicated by an incisional hernia, small bowel obstruction, and subsequent abdominal abscess which necessitated further surgery within the past year. It was at this time that he was found to have the above mentioned laboratory abnormalities.

At presentation his medications included methadone, hydrocodone, diazepam, methocarbamol, acetaminophen, cephalexin, aspirin, furosemide, hydrochlorothiazide, metoprolol, multivitamin, b12, calcium citrate, vitamin A, zinc, and vitamin C.

On exam he was febrile, without lymphadenopathy or hepatosplenomegaly. His labs were significant for a white count of 1.9 with and ANC of 500 and a hemoglobin of 9.0. His smear showed anisocytosis, poikilocytosis, occ. target cells, oval and teardrop cells. ANA, HIV, C-ANCA, P-ANCA, and hepatitis serologies were all normal.

SUBDURAL HEMATOMA AS A COMPLICATION OF DIAGNOSTIC LUMBAR PUNCTURE

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A 56-year-old woman with a history of a large left-sided CVA subsequently diagnosed with a hypercoagulable state and treated with chronic anticoagulation presented to her physician for evaluation of progressive weakness and paresthesias involving both legs. These symptoms had interfered with her ability to walk, feed, dress, and care for herself independently. The patient had declined over the previous six months, requiring her daughter to provide increasing levels of assistance with most activities of daily living. She also reported a decrease in appetite and significant weight loss, as well as worsening depressive symptoms. Her exam was notable for being cachectic with stable right-sided facial weakness from her previous CVA. The rest of her neurologic exam revealed bilateral foot drop and severe weakness of the plantar flexors, decreased proprioception in her toes, and absent achilles tendon reflexes bilaterally. She otherwise had only mild weakness of her upper extremities and proximal lower extremity muscle groups.

She was referred to the neurology service who began an extensive inpatient workup including a brain MRI that showed only her old infarct with involitional changes in the distribution of the left middle cerebral artery. Her work-up proceeded with a lumbar puncture. CSF analysis was unrevealing other than a protein level of 110. Overall, her diagnosis was felt to be consistent with chronic inflammatory demyelinating polyneuropathy (CIDP), which was confirmed by muscle and nerve biopsies. Her brief hospitalization was complicated by the development of a new severe positional headache which was thought to be consistent with a post-lumbar puncture headache by her neurologists. Treatment with a blood patch was discussed but ultimately not performed. Her care was transferred to the general internal medicine service for continued care and rehabilitation.

The patient continued to have a persistent severe headache that was exacerbated by standing, was refractory to high doses of pain medications, and prevented participation with physical therapy or even sitting to eat meals. The pattern of her headache, as well as the timing of onset soon after her procedure, still suggested a post-lumbar puncture headache, however the duration and severity of the patient's symptoms was concerning.

A non-contrast head CT was obtained that showed new bilateral subdural hematomas, left greater than right, with mass effect demonstrated by compression of the lateral ventricles and the area of leukoencephalomalacia previously seen in the left parietal lobe on her very recent brain MRI as well as her prior head CT done soon after her CVA. There was no midline shift. The patient had remained in the hospital and had not suffered any traumatic head injuries since the MRI was performed at the beginning of her hospitalization. She underwent evaluation by the neurosurgical service who felt evacuation was unnecessary but recommended a blood patch as they felt the subdural collections were a result of loss of cerebrospinal fluid into the subcutaneous tissues following the LP, leading

to intracranial hypotension and rupture of the subdural veins. A blood patch was placed with immediate resolution of the patient's headache. A repeat CT scan performed 8 days after the blood patch showed resolution of the subdural hematomas and mass effect. The patient subsequently underwent therapy for CIDP and was discharged to a rehabilitation facility in improved condition.

Upon review of the literature, subdural hematoma following lumbar puncture has been reported to be a rare but serious complication of the procedure. The incidence and exact risk is not able to be calculated as cases can only be collected from the literature. However, these patients often do very poorly with some cases resulting in death and a majority of cases requiring surgical intervention, frequently resulting in long-term neurological sequelae.

SCURVY IN THE UPPER VALLEY

by Dr. Jennifer Quinn

A 52 year old woman presented to the Dartmouth Hitchcock Emergency Room complaining of progressively worsening bilateral lower extremity pain and edema for a week to ten days followed by a rash and bruising on her calves. On the morning of presentation she was unable to bear weight secondary to both pain and muscle weakness. Pertinent positives on physical exam included periocular hyperpigmentation, purpuric gingiva, scaphoid abdomen, and both diffuse ecchymoses over her ankles and calves as well as scattered petechiae from over both her lower extremities. Corkscrew hairs were noted over both upper and lower extremities. Her legs were sensitive to touch and she was unable to dorsiflex secondary to pain. Hematologic and rheumatologic evaluation did not reveal the cause of her condition. A careful patient interview established that her diet consisted primarily of meats, legumes and grain products that did not contain gluten. Pathology from a skin punch biopsy showed no evidence of vasculitis but did reveal perifollicular hemorrhage. Subsequently, an ascorbic acid level was obtained and was found to be undetectable. She was started on both oral and parenteral ascorbic acid therapy along with thiamine, folate and multivitamin supplementation. The rash, bruising and pain began to resolve after four days. To date she has had no severe recurrence of her symptoms although her legs still remain tender.

The assessment was that his neutropenia was medication related; his hctz, cephalixin, metoprolol, aspirin, and acetaminophen were all discontinued without improvement in his neutropenia. A bone marrow biopsy was normocellular with myeloid hypoplasia and adequate iron stores. He was started on GCSF with a modest response.

This workup continued over the next year until he was admitted for neutropenic fever. At this time, a thorough review of his medications found him to be taking zinc 150 mg twice a day. Subsequently his serum copper and ceruloplasmin levels were checked and found to be extremely low at <0.1ug/mL and 1.3 mg/dL, respectively. Discontinuation of zinc with copper supplementation resulted in an increase in his white count to 4.1 and hemoglobin to 12.4 within one month.

This is a rare case of zinc toxicity causing copper deficiency and resultant neutropenia and anemia. The USDA recommends no more than 15mg/day for adults. This particular patient was taking zinc for wound healing however, there is little evidence for the efficacy of zinc supplementation for chronic wound healing.

TRAINING FOR SOLO-PRACTICE

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Solo-practice remains a common form of medical practice (approximately 140,000 or 43% of self-employed US physicians according to the American Medical Association). As long as rural areas remain underserved, a role will exist for solo-practitioners. However, formal solo-practice training seems to be uncommon in residency. This deficit may create irrational bias among current trainees' against solo-practice careers. We sought to assess the training of practicing physicians in regard to actual solo-practice experience and comfort levels at the completion of residency. We surveyed both academic and private physicians among the Northern New England Co-op & Dartmouth Medical School Faculty (1100 surveys sent by mail or email, 33% response rate, n = 360). The survey assessed past experience with solo-practice, career decision-making factors, and comfort-level with solo-practice following training (based upon a Likert Scale). Academic and private respondents were statistically similar in age, years of experience, and post-training comfort index. The rate of rural practice was 3.6 times greater among the private physicians (32 vs. 9%, p <0.0001). Among the survey respondents, private physicians were 1.4 times more likely to consider a career in solo-practice at the completion of residency than academic physicians (59 vs. 43%, p = 0.0013). On average, private physicians had 5 times as many years of solo-practice experience (7 vs. 1.38 years, p<0.0001), and provided unprompted recommendations of business training during residency nearly twice as often as academicians (43 vs. 23%, p = 0.0014). In conclusion, significant differences exist in solo-practice interest and experience between academicians and private practice physicians that responded to this survey. These differences may bias training against careers in solo-practice, and thereby hinder the nationwide effort to staff rural underserved areas, which traditionally rely more heavily upon physicians in solo practice.

POLYCYSTIC LIVER DISEASE, by Dr. Jonathan Duffy

Polycystic liver disease is characterized by benign cysts involving only the liver. Larger cysts are more likely to cause symptoms. The cysts tend to become larger and more numerous with age. In this case, a 52 year old African-American male originally presented to clinic concerned about a persistent feeling of fullness in the right upper quadrant of his abdomen without other associated symptoms. His exam was remarkable only for a palpable liver margin. Liver function tests were normal.

Ultrasound revealed innumerable cysts in the liver ranging in size from a few millimeters up to the largest at 8 cm. The kidneys and spleen were without cysts. He was given the diagnosis of polycystic liver disease. Six years after his initial diagnosis, he presented to the emergency room complaining of one day of moderate right upper quadrant pain without other symptoms. His exam was again significant for a palpable liver margin, which was now tender. Abdominal ultrasound revealed that one cyst, 7.4 cm in diameter, was heterogeneous and thus suspicious for hemorrhage or infection. His pain remitted spontaneously, and a follow up CT scan 2 weeks later did not reveal any enhancing lesions. He will be followed clinically, and no intervention is planned unless he has return of pain or develops new symptoms.

Single, simple cysts of the liver occur in up to 5% of the population, are often found incidentally on imaging, and require no further workup. Radiographic characteristics and history are usually sufficient to differentiate simple cysts from other types of hepatic cysts. The most common cause of numerous hepatic cysts is polycystic kidney disease. Polycystic liver disease is characterized by absence of extrahepatic cysts. An autosomal dominant form has been identified. Abdominal pain may result from cysts, usually larger than 5 cm, due to mass effect, rupture, infection, or bleeding into a cyst. The later being most likely in this case. Treatment is surgical and reserved for symptomatic cases. Laparoscopic unroofing of cysts is currently the recommended procedure.

HYPOGAMMAGLOBULINEMIA IN A CARDIAC TRANSPLANT PATIENT, by Dr. Kevin Flemming

We presented a case of a patient who presented with a large intercranial hemorrhage who did very poorly and was not surgical. He had a history 2 heart transplants and was found to be hypogammaglobulinemic on lab review. Literature review found rare cases of solid organ transplant patients who had hypogammaglobulinemia. Usually they present with uncommon infections generally found in immunosuppressed patients like CMV or atypical bacterial infections.

ORBITAL SARCOIDOSIS: AN UNCOMMON PRESENTATION OF A COMMON DISEASE

Jason Foerst MD, Margo Krasnoff MD, Kim Ornvold MD. Dartmouth Hitchcock Medical Center, Lebanon, NH

Sarcoidosis is a multi-system, inflammatory process of unknown etiology. Ocular or orbital manifestations are present in 25-50% of cases. This case is unusual with the isolated orbital symptoms and a confounding history of cat bite and treatment for Bartonella infection.

A 53 year old Caucasian woman presented to the emergency department for the evaluation of an enlarging right sided peri-orbital mass. One year prior a feral cat bit her on the finger of her right hand. She subsequently

noted pain and swelling in her right hand and arm and then months later started to notice "bumps" under her right eye. The bumps progressed to marked gross swelling and proptosis, and six months after the initial cat bite she saw an ophthalmologist. An MRI was performed, revealing a large mass extending from the lacrimal gland to the inferior orbit. Biopsy revealed non-caseating granulomatous inflammation, and Warthin-starry stain showed rod-shaped and smaller fragments of silver-positive material suggestive of rod shaped organisms. An infectious disease consultant felt that her history and biopsy could be consistent with Bartonella infection. Bartonella antibody titers were on the low-end of positive, and she was treated for several months with antibiotics (rifampin, azithromycin, ciprofloxacin) without improvement. Three months after her initial biopsy, she had a repeat biopsy again revealing non-caseating granuloma, and was admitted to the general medicine service with the presumptive diagnosis of sarcoidosis. Repeat MRI of the right orbit revealed progression of inflammation to both intra- and extraconal spaces without evidence of direct optic nerve invasion or bony

invasion. A CT scan of the chest revealed numerous small pulmonary nodules. Serologic testing was pertinent for negative P-ANCA, negative C-ANCA, myeloperoxidase antibody <2.0 U/mL and elevated proteinase-3 antibody at 6.9 U/mL (normal <2 U/mL). Erythrocyte sedimentation rate was 24 mm/hr and angiotensin converting enzyme was 55 U/L (normal 7-46 U/L). The patient was started on prednisone 80 mg orally once daily and continued on a prolonged steroid taper. Her swelling and diplopia improved over the following month. Hydroxychloroquine was added with further improvement in symptoms. Four months after discharge a repeat MRI revealed marked improvement in inflammation.

The differential for orbital swelling includes lymphoma, sarcoidosis, Wegener's granulomatosis, polyarteritis nodosa, fungal infection, and metastatic tumor. Careful history, serologic markers, biopsy and imaging should be used to help make the diagnosis.