West Virginia Medical JOURNAL

March/April 2012
Vol. 108, No. 2

West Virginia State Medical Association

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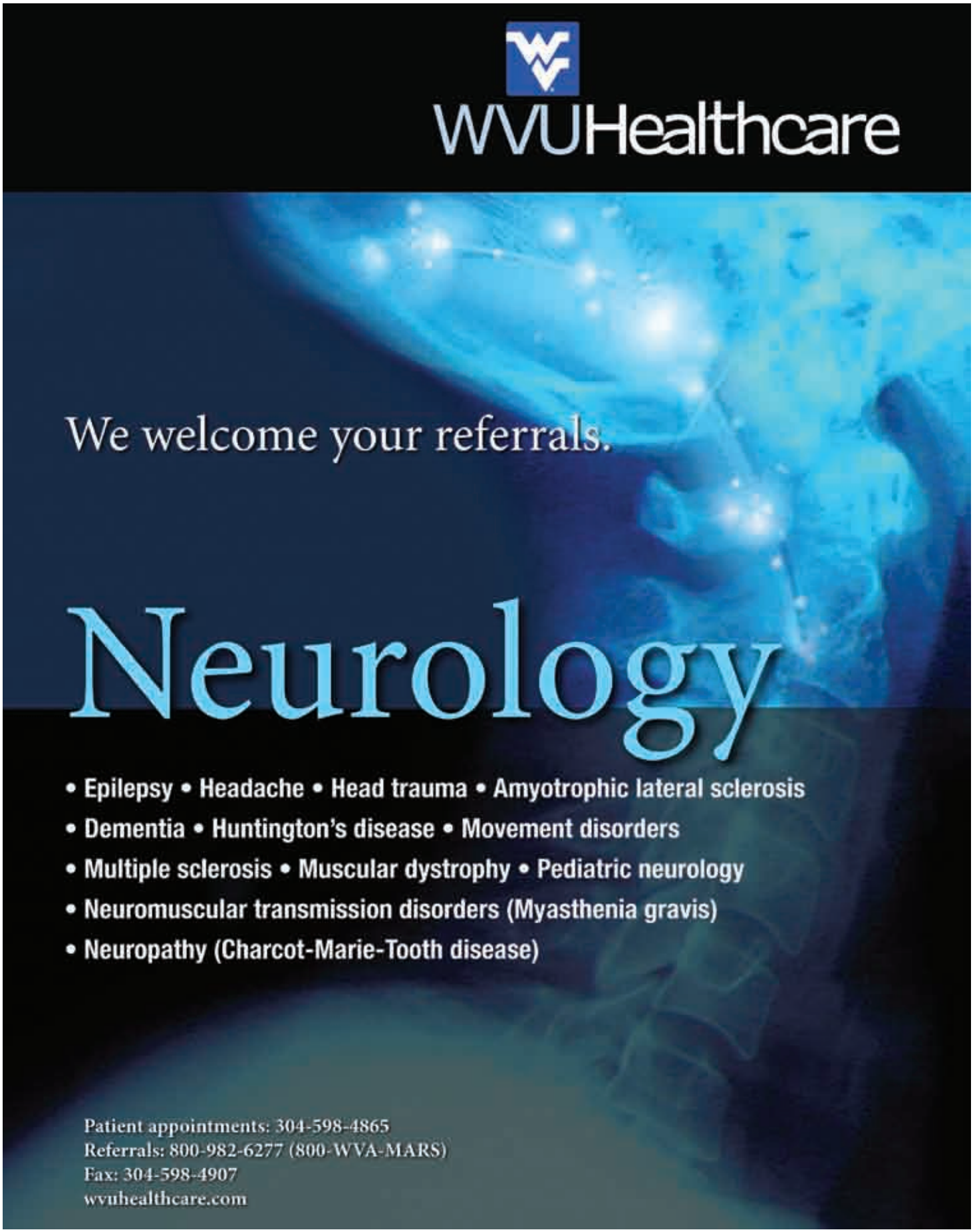
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Cover photo courtesy of Patsy Lee Anderson
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The ***West Virginia Medical Journal*** is published bimonthly by the West Virginia State Medical Association, 4307 MacCorkle Ave., SE, Charleston, WV 25304, under the direction of the Publication Committee. The views expressed in the *Journal* are those of the individual authors and do not necessarily reflect the policies or opinions of the *Journal's* editor, associate editors, the WVSMA and affiliate organizations and their staff.

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President's Message

Is This The World We Want?

Health care in the United States has been in a state of evolution over the past 40 to 50 years. A number of factors influence these changes, including economic pressures, advances in technology, political pressures, and the changing demographics of our nation.

What do we have to look forward to as physicians? If the opinions of many experts hold true, the replacement of the independent, private physician practice model is inevitable. Many pressures will force physicians to consolidate with other physicians, or become employees of a hospital, or health care delivery system because they will lack the money or technical or administrative resources needed to survive on their own.

The emerging practice models will vary depending on where in the country one practices. New terms such as Accountable Care Organizations (ACOs), Medical Home, Aligned Groups, Concierge Practice, Community Health Centers, and Small Aligned Groups will be common place.

Current and future health care reforms will impact physicians in ways not seen in the past. Complying with government regulations is going to become a minefield; and of course, open up new, potential areas of liability. Many of you have heard of the "Whistleblower". The government is pouring a great deal of money into this program to recoup funds possibly obtained by fraud. The government is also discussing suspension of the need to prove that one intended to defraud. The average doctor is going to be out matched in this environment.

This new medical practice climate is going to cause many physicians to retire early or change careers. Sadly, I would imagine that many young people will not be encouraged by practicing physicians to seek a career in medicine. If we think we have a physician shortage now, what on earth does the future offer? Primary care shortages especially are going to be severe. There is no doubt that future primary care doctors will spend less time with patients. He or she will spend the bulk of their time reviewing practice patterns, seeing the most difficult cases, and updating information technology templates on their computer. This may appeal to the individual who does not enjoy interacting one on one with their patients. I do not personally believe that anyone has been trained for this. Those physicians are going to be pressured to change practice patterns. We will utilize more and more allied health professionals in order to meet public and government demand for higher quality care at a lower price. Look at all the problems with the Sustainable Growth Rate (SGR) formula and ask yourself if increased reimbursement for your services despite increasing overhead costs is going to be part of this NEW WORLD.

Surveys of physicians about health care reforms have been widely unfavorable. Most physicians feel that the reforms cause them to work harder for less pay in order to care for their patients in this environment. Physicians wonder if they can afford to practice medicine. The future of the full-time, independent physician accepting third party payments will die. New physician classifications will be Part-Time Physician, Employed Physician, and Concierge Physician.

Thomas Paine wrote on December 23, 1776 "These are the times that try men's souls, but he that stands by it now, deserves the love and thanks of man and woman". My fellow West Virginia physicians, these are troubling times for men and women of medicine. If you feel you can tackle the issues on your own, then continue on as if no storm is brewing. If you are concerned, which I feel many of you are, then embrace and support organized medicine's efforts to have a voice in the decision process. If we have greater numbers, maybe we can MOVE THE WORLD.

MaryAnn N. Cater, DO
WVSMA President

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Top Four most innovative and thought-provoking...

Comments on "Teaching the Art of Medicine"

We want to thank the authors of the original article, "Teaching the Art of Medicine: A Changing Portrait in Today's Medical Schools"*; R. Aaron Lambert, MD, Todd W. Gress, MD, MPH and Marie Veitia, PhD. Their article appeared in the November/ December 2011* West Virginia Medical Journal. *Additionally, we are grateful to Dr. Jim Felsen for his insightful introduction article, "Retaining the Art of Medicine", which preceded the special article.*

Greenbrier Almond, MD

Total Life Clinicians LLC

"Always exceed your patient's expectations!" Doc declared during a live broadcast of my weekly TV program, "Tender Loving Care" streaming out through our local community access TV channel. Doc was responding to my query about the Art of Medicine.

I had followed my father, Harold D. Almond MD, into the practice of medicine but I had yet to have my patients love me like his loved him. "Dad", I said exasperated, "that is a prescription for burn-out". Even WVU Medical School Dean, Robert D'Alessandri MD, praised Doc on the opening day of class in 1998 when he invited Dad to tell three stories from his memoir, STORIES OF A WEST VIRGINIA DOCTOR. Dean "Bob" explained, "You will learn much about the scientific basis of medicine in the next four years but today you will learn much about the compassion and caring of our healing profession." The students appeared impressed and came forward for autographs afterwards.

Doc stuck by his guns on the TV show as he recalled his brother's death from erysipelas when he was ten years old. There were no antibiotics and witch hazel did not cure. Doc prayed to God for a chance to be a physician. God heard his prayer though much happened along the way including his mother's death, the Great Depression and World War II. "I wanted my chance to practice medicine and I got it!"

Still pondering Dad's remarks the next evening, I covered the office while he delivered a baby at St. Joseph's Hospital. A mother with three coughing and wheezing children came in and waited their turn. Doc worked without appointments. "I want to see folk when they are sick. If they have to wait two weeks for an appointment they will either be well or be dead." After examining the children and prescribing medication for the children I told Mom that it would be $10.00 for each child as this was Doc's customary fee. She acted surprised. "No", she insisted, "When I bring all three at the same time Doc only charges for one."

"Yes, of course, that will be $10.00. You are fortunate to have such fine children."

Philip Eskew, JD, MBA, MSIV

West Virginia School of Osteopathic Medicine

Unfortunately the question, "[c]an the art of medicine be taught?" is rarely reached. The art of medicine could certainly be taught in any phase of medical school. Can the art of medicine be tested? This is the roadblock question. Too much of medical education is designed around taking standardized exams. Students might want to learn the art of medicine, but this artistic freedom remains unavailable until students prove they can memorize standard science verbatim.

It appears that most physicians would agree that medicine is as much an art as a science. We run into problems because we are in a suffocating standardized exam environment, where the frequency of standardized exams via board certification has grown exponentially over the years. If we truly embrace the "art of medicine" concept, it requires an admission that not all aspects of medicine can be tested, and that these same subjective aspects of medicine are often important. Great artists become great through practice and dedication, not via standardized exams. A physician's patients are the only ones qualified to judge his artistic ability, and until we come to this realization as a profession, the art of medicine will suffer.

Shirley Neitch, MD

Professor of Medicine, and Chief,
Sections of General Internal Medicine and Geriatrics
Department of Internal Medicine
Marshall University/Joan C. Edwards School of Medicine

Drs. Lambert, Gress, and Veitia raise an important and heretofore neglected question which has implications for medical education and practice.

For those of us who have been in practice for ….ahem… "a while", the value of art of medicine is unassailable. Yet looking back, we probably didn't astutely recognize this when we were younger. As young students and residents we are all about the numbers and our ability to manipulate them. Then time passes, and abundant and

diverse patients pass through our practices, and we realize that we haven't always been right when we've manipulated, and outcomes haven't always been what science told us to expect. Only when we begin to understand that indeed, human beings are "fearfully and wonderfully made" (Psalm 139:14) in ways beyond science, do we fully realize the importance of the art.

The art of medicine can clearly be learned, but whether it can be successfully taught is another question. This is clearly important for medical education and for practice. We are frustrated daily by performance standards which blatantly ignore the art of medicine and its contribution to patients' well-being. But, as much as we rail against the standard-setters, are they fully to blame for acting like science and numbers matter most, since we did the same as our younger selves?

I propose that rather than trying to teach the art of medicine, we need to let time and experience do that while we find ways to teach respect for the art of medicine. As important as they are, the students' sole heroes shouldn't be the intensivists and interventionalists and other purveyors of quick results and formulaic order sets. We need to discover ways to show both students and policy makers that sometimes not doing is more important than doing, and sometimes not knowing is perfectly okay.

Joseph V. Russo, MS-I

Marshall University Joan C. Edwards SOM

The "Art" of medicine, from the perspective of a first-year medical student, is an elusive concept which represents the culmination of years of training and experience. However, there is some substance to this concept which even those in process of attaining skills and experience can recognize in their mentors and aspire toward. The question as to whether it can be taught is difficult because I don't think that the traditional lecture or group discussion formats can convey this type of information. In my opinion, the "Art" of medicine goes beyond the study of professional ethics and the biopsychosocial model of medicine which fit neatly into the context of classroom discussion. Instead, I believe the "Art" of medicine is best modeled by those practitioners who have mastered the ability to consistently communicate effectively with patients. It is this skill which I am most anxious to acquire, and which I have observed both exemplary and poor examples of so far in the clinic. Little formal discussion is necessary because as an observer there is a clear difference in the clinical encounter when a patient feels that a physician has truly listened to them and values them as a person.

Optimum Utilization of Cholecystokinin Cholescintigraphy (CCK-HIDA) in Clinical Practice: An Evidence Based Review

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West Virginia University/Charleston Division

Abstract

Laparoscopic cholecystectomy remains one of the most commonly performed operations in the United States. Of the cholecystectomies performed, approximately 30% are carried out for a diagnosis of gallbladder dyskinesia, for which diagnosis is based on a reduced gallbladder ejection fraction as determined by a sincalide (cholecystokinin) stimulated hepatobiliary iminodiacetic scan (CCK-HIDA). Despite the widespread acceptance of this practice standardization of the test methodology and high quality data indicating efficacy of cholecystectomy in the treatment of this condition are lacking. This manuscript reviews this problem in detail based on the current available literature.

Introduction

Cholecystokinin-cholescintigraphy (CCK-HIDA) is commonly performed to evaluate patients with upper abdominal pain thought to be biliary in origin and in whom the gallbladder is found to be normal on ultrasound. Cholecystectomy is commonly performed based on the finding of an abnormally low gallbladder ejection fraction.[1] The testing methods and results of surgery for biliary dyskinesia are controversial and poorly understood by many clinicians. This review discusses the controversies surrounding the testing methods, the determination of normal vs. abnormal values, and the data both supporting and questioning its use in current practice.

Background

For years, surgeons, gastroenterologists and primary care physicians have encountered patients with complaints consistent with biliary disease, but with negative ultrasound imaging of the gallbladder, thus creating a diagnostic dilemma.

In 1991 a randomized, prospective study was published by Yap et al.[2] in which a population of patients with suspected pain of biliary origin (and a negative gallbladder ultrasound) underwent CCK-HIDA scan with calculation of the gallbladder ejection fraction. Those with an abnormal ejection fraction (<40%) comprised the primary study group, and were randomized to either cholecystectomy or no cholecystectomy (observation) groups. Patients who underwent cholecystectomy did dramatically better than those who were merely observed. The remainder of the patients – those with pain but a with a normal ejection fraction - were treated at the discretion of their doctors. Those with a normal ejection fraction who had surgery did no better than those who were observed. The Yap study concluded was that a low gallbladder ejection fraction was predictive of success in patients undergoing cholecystectomy for acalculous biliary pain. Based on these data, clinicians began offering cholecystectomy to patients who met these criteria.[2]

A Closer Look at the Yap Study

The Yap study, although interesting and widely quoted, has had a number of criticisms. First, the study population of patients with low gallbladder ejection fraction (GBEF) was only 21 patients! (11 surgery, 10 observation) Of the 11 undergoing surgery, 10 experienced total relief and one experienced improvement. Of the 10 in the observation group, all remained symptomatic, and two of these crossed over to the surgery arm and subsequently did well.[2] Amazingly, this remains the only randomized prospective trial to date examining the role of surgery in treating this condition. It was harshly criticized in a 2008 Cochrane review for not only being severely underpowered in terms of sample size, but also at significant risk of bias.[3]

Other data on the efficacy of CCK-HIDA in predicting response to cholecystectomy have been published with conflicting results, with success rates ranging from no benefit to a 96.6% cure rate.[4] A recent systematic review by DiBaise et al.[5] found that the calculation of the gallbladder ejection fraction (GBEF) was useful in selecting patients for surgery in 19 of 23 papers studied, including that of Yap et al. However, the investigators noted that the studies were small, nonrandomized, retrospective, uncontrolled, and with varying durations of follow up, with varying symptoms used to define biliary pain, and with varying definitions of successful outcome. These flaws, and the heterogeneity of the data, make it difficult, if not impossible, to draw any evidence based conclusions from it.[5]

Reasons Limiting the Usefulness of CCK-HIDA

To understand the shortcomings of these various studies, and the current knowledge gaps in this area of clinical practice, one must first understand the controversies surrounding the performance of the CCK-HIDA scan itself. A key aspect of the CCK-HIDA scan is the manner in which normal vs. abnormal gallbladder ejection fraction results are determined, and how this differs from other diagnostic tests. With the majority of diagnostic tests, an abnormal value is *predictive of pathology* – for example, the finding of gallstones on ultrasound, a spiculated density on mammography, or an infiltrate on chest X-ray. CCK-HIDA is distinctly different however, in that the normal vs. abnormal values for GBEF are calculated from values obtained from *normal subjects*, with the cutoff of normal vs. abnormal typically designated at three standard deviations from the mean.[2,6] In other words, the values are calculated from what is "normal" in the general population and "abnormal" values, by definition, are therefore not necessarily predictive of a disease state. They simply are values that fall outside the normal distribution. For this reason, it is expected that some normal volunteers will have an abnormal GBEF. Conversely, some patients with functional biliary pain may have GBEF values within the normal range.

Additionally, much controversy exists in the testing methodology. CCK-HIDA, despite widespread use in clinical practice, suffers from a lack of standardization of test methodology in several important areas. These include dose of sincalide (CCK) administered, duration of administration, and time at which GBEF is calculated. A review of the published studies on the use of CCK-HIDA revealed CCK doses from 0.005mcg/kg to 0.03 mcg/kg, infusion durations ranging from 2-3 minutes all the way up to 45 minutes, and normal vs. abnormal cutoff values ranging from 35%-65%. In some published studies, the exact nature of the testing protocol was not even described.[7]

Zeissman et al. examined this issue in a multicenter trial designed to determine the most reliable, reproducible, and least variable protocol. They conducted studies on normal subjects with a variety of infusion and imaging protocols and found their results to be the most consistent and reproducible with a dose of 0.02mcg/kg CCK, continuously infused over 60 minutes, and with the GBEF calculated at 60 minutes. The threshold for normal vs. abnormal in their study was 38%.[6] This study was only recently published however, and testing protocols continue to vary from center to center.

Finally, the test is often conducted under conditions which may adversely affect the accuracy of the results. The Society of Nuclear Medicine and other thought leaders in the nuclear medicine field have specifically stated, for example, that CCK-HIDA should be performed solely on an outpatient basis, and not while the patient is acutely ill, so that confounding factors including the effects of medications may be avoided. It is further recommended that opiates be withheld for a full four half-lives of the drug prior to testing. A number of other drugs, including benzodiazepines, atropine, nifedipine, indomethacin, octreotide, theophylline, phentolamine, and progesterone are also capable of affecting the test results and should also be avoided for several hours prior to testing. Failure to adhere to these recommendations may result in lower values for GBEF than would be obtained under optimal test conditions in the same patient.[8]

Proper Patient Selection

Patient selection may also be an issue that has affected the reliability of CCK-HIDA in predicting symptom relief after cholecystectomy. Current expert opinion based on the available data favors cholecystectomy for patients with biliary symptoms and an abnormal GBEF, and discourages cholecystectomy in cases involving atypical symptoms.[1,9] The definition of what constitutes the most appropriate and valid description of biliary symptoms is a matter of debate and has been a source of controversy in previously published reviews on this subject.[5] Symptoms however remain crucial in selecting which patients should undergo diagnostic biliary testing, including CCK-HIDA. It only seems logical that removal of the gallbladder will be of greatest benefit to those patients suffering from gallbladder pathology. Furthermore, in the review by DiBaise and Oleynikov, the authors commented that a standardized and reliable set of diagnostic criteria for functional biliary pain was important in selecting patients for further biliary testing (CCK-HIDA).[5] The results of their pooled analysis revealed that outcomes were better in selected patients – i.e., those with biliary symptoms and an abnormal GBEF. Outcomes were not improved in patients with biliary symptoms and a normal GBEF when compared with observational controls.[5]

These data, although once again limited by the retrospective nature of the study, the heterogeneity of the pooled data, and the high risk of bias, suggest the need for reliable diagnostic criteria in the selection of patients for CCK-HIDA, since it is the combination or typical symptoms and an abnormal GBEF that provide the best chance of success with operation.

Table I. The Rome III Criteria for Functional Gallbladder and Sphincer of Oddi Disorders[12]

I. Functional Gallbladder and Sphincer of Oddi Disorders:

Must include episodes of pain located in the epigastrium and right upper quadrant and all of the following:

1. Epsisodes lasing 30 minutes or longer
2. Recurrent symptoms occurring at different intervals
3. The pain builds up to a steady level.
4. The pain is severe enough to interrupt the patient's daily activities or lead to an emergency room visit
5. The pain is not relieved by bowel movements
6. The pain is not relieved by postural change
7. The pain is not relieved by antacids
8. Exclusion of other structural diseases that would explain the symptoms

Supportive criteria:

The pain may present with one or more of the following:

1. Associated with nausea and vomiting
2. Radiates to the back and/or right infrascapular area
3. Awakens patient from sleep in the middle of the night.

II. Functional Gallbladder Disorder

Must include **all** of the following:

1. Criteria for functional gallbladder and sphincter of Oddi disorder
2. Gallbladder is present
3. Normal liver enzymes, conjugated bilirubin, and amylase/lipase

Other misconceptions involving patient selection for surgery based on the results of CCK-HIDA are worth mentioning. One such misconception is the assumption that the degree of lowering of GBEF is predictive of success. (In other words, a GBEF of 3% is more likely have a favorable response to cholecystectomy than a patient with the same symptoms but a GBEF of 24%). This has not proven to be the case in the data published to date.[10] Another misconception involves the idea that the reproduction of patient symptoms with CCK injection is another predictor of success with cholecystectomy. This assumption has also proven to be false. CCK is known to stimulate other organs besides the gallbladder, including the small intestine and stomach, which may produce unpleasant pain and cramping. When administered intravenously, especially in a 2-3 minute infusion protocol, unpleasant symptoms are not uncommon and have no predictive value with respect to relief of biliary pain with cholecystectomy.[11]

The Rome III criteria for functional gallbladder disorder (Table I), is perhaps the best known standardized symptom complex for the diagnosis of functional gallbladder disorder and the subsequent selection of patients to undergo CCK-HIDA scanning for suspected biliary dyskinesia.[12] The ordering of CCK-HIDA studies in patients with atypical symptoms not suggestive of functional biliary disorder should be discouraged, as some of these patients may indeed have an abnormal GBEF in the absence of disease. Failure to grasp this concept may result in inappropriate referrals for surgery, thereby subjecting the patient to unnecessary risk and a higher likelihood of no benefit from cholecystectomy.

Summary

Based on review of the current literature on this topic, it seems appropriate to conclude:

- The use of CCK-HIDA scan (and GBEF) to select which patients with pain of biliary origin should undergo cholecystectomy is an acceptable practice under current Society of Gastrointestinal and Laparoendocopic Surgeons (SAGES) clinical guidelines.
- The use of the CCK-HIDA should be restricted to those patients meeting criteria for functional biliary pain/ functional gallbladder disorder according to established criteria, such as those proposed by the Rome III committee. The use of CCK-HIDA in the investigation of atypical symptoms should be avoided.
- No data exist to suggest that symptom reproduction with CCK injection or degree of GBEF abnormality is predictive of relief of symptoms by cholecystectomy, and these criteria should not be used to select patients for surgery.
- Clinicians should adhere to the recommendations of the Society of Nuclear Medicine with respect to the conduct of the CCK-HIDA scan, and to which medications should be held prior to testing, so that the chances of false positive scans is minimized.
- Further study is needed to define the optimal protocol for dosing

schedule, CCK infusion time, and cutoff value for normal vs. abnormal values. The recent work of Zeissman et al. proposing that this should be 0.02mcg/kg infused over 60 minutes, with the cutoff value for normal being 38% is a laudable attempt to standardize the practice, but the results will need to be replicated in subsequent studies.

- More randomized, prospective, well-controlled trials are needed investigating the role of CCK-HIDA scan in the diagnosis of acalculous bilary pain/functional gallbladder disorder, and in patient selection for the surgical treatment of this condition.

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Intact Bronchogenic Cyst Presenting as a Lung Mass Provoking a Pleural Effusion: A Rare Presentation

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Financial support: The Department of Medicine provided funds in support of this research.

Disclaimer: Accepted for Poster Presentation at the American Thoracic Society annual meeting in May 2010, under title of "Intact bronchogenic cyst presenting as a lung mass provoking a pleural effusion: A rare presentation".

Abstract

This case report describes a 49 year old woman with an intra-parenchymal bronchogenic cyst masked on chest x-ray examination by a pleural effusion. The cyst was intact. It is likely that the cyst provoked the pleural effusion by repetitive mechanical irritation of the pleura. At surgery, the cyst was removed and the pleural effusion drained without recurrence. The cyst was unilocular and measured 8.5 x 7.0 x 0.8 cm with a smooth and glistening lining. It was filled with approximately 300 ml of clear fluid. Microscopic examination confirmed the bronchogenic cyst. This is the first case of an intact intra-parenchymal bronchogenic cyst associated with a pleural effusion that was not due to rupture of the cyst, infection or malignancy.

Introduction

Bronchogenic cysts are developmental anomalies resulting from an abnormal budding of the tracheobronchial tree.[1] They occur rarely; the incidence is unknown. However, 70-85% of the bronchogenic cysts occur in the mediastinum, and are usually discovered on routine chest roentgenogram, but eventually become symptomatic in adults.[2] Uncommonly, they manifest as intra-parenchymal cysts, often producing symptoms of respiratory disease.[3] We report a case of an intact intra-parenchymal bronchogenic cyst with associated pleural effusion which to our knowledge has not been documented in the medical literature.

Case Report

A 49 year old woman presented with left sided pleuritic chest pain, nonproductive cough and progressive exertional dyspnea for two months. She denied fever or hemoptysis. Her vital signs were RR 22, HR 82, BP 124/72 and temp afebrile. On examination, the chest was non-tender; the left lower lung field was dull to percussion with diminished breath sounds and no rales or wheezes. Clubbing or cyanosis was absent. Chest x-ray showed left lower lobe airspace disease with pleural effusion (Figure 1). The CT scan revealed an 8.5 cm thin-walled hypodense mass with calcium deposition in the dependent region (Figure 2) associated with a pleural effusion and compressive atelectasis. A thoracentesis was negative for infection or malignancy and bronchoscopy was normal. Subsequently, a left thoracotomy was performed and a fluid-filled large cyst adherent to the adjacent left lower lobe and diaphragm was identified. The cyst was excised and a pleural effusion of 450 ml was drained. Gross examination revealed an intact unilocular cyst (8.5 x 7.0 x 0.8 cm) with smooth, glistening lining filled with approximately 300 ml of clear fluid. Pathologic examination of the excised tissue confirmed the bronchogenic cyst (Figure 3). Malignancy and infection were absent. The patient recovered uneventfully (Figure 2).

Discussion

Bronchogenic cysts are congenital lesions which result from abnormal budding of the tracheobronchial tree during the first 16 weeks of gestation.[4] Most cysts are located in the mediastinum near the tracheal carina, but 15% may occur in the lung parenchyma.[1] The mean age of presentation in adults is 38 years with a range of 17-70 years. Cysts within the lung parenchyma usually present with cough and chest pain, as our patient manifested.

Intraparenchymal cysts are more frequently located in the lower lobes without predilection for either side.[5] At radiography, cysts are usually thin-walled (1-2mm) and may contain an air fluid level when a communication exists with the tracheobronchial tree.[6] This pattern occurs with other acquired or congenital pulmonary cystic diseases such as pulmonary sequestrated abscess, or bullous emphysema with which a bronchogenic cyst might be confused.

Our case is unique since the bronchogenic cyst margins were well defined without any evidence of cyst rupture, a finding confirmed at surgery. Percutaneous drainage of the pleural fluid was helpful in excluding infection and malignancy, but not in establishing the diagnosis of underlying etiology. Two previous reports described pleural effusion complicating bronchogenic cyst; the first was a mediastinal bronchogenic cyst with a pleural

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Figure 1.
AP view chest radiograph showing left lower airspace disease with blunting of the left costophrenic angle due to a moderate pleural effusion

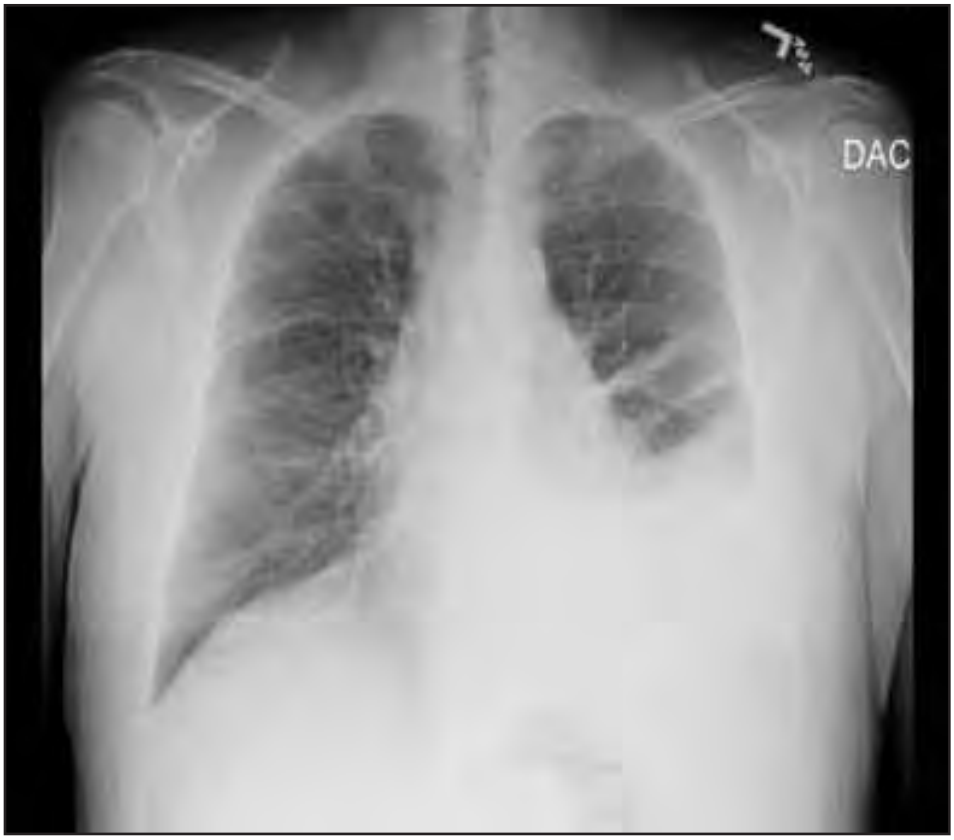

Figure 2.
CT scan images before and after surgical removal of bronchogenic cyst showing a smooth, thin walled mass in the left costophrenic angle measuring 8.5 x 7.0 cm with accumulation of milk of calcium in the dependent region. Associated with the mass is a moderate size left pleural effusion and compressive atelectasis. Following surgical removal there is complete resolution

effusion apparently unrelated to any other underlying disease, such as congestive heart failure or trauma, and the second was an intra-pulmonary bronchogenic cyst that ruptured and presented with a pleural effusion.[7,8]

In our case, the pleural effusion appeared to have developed as a result of inflammation of the pleura consequent to the fluid filled cyst abutting on the diaphragm. The gradual accumulation of approximately 300 ml of fluid in the cyst, which weighed close to 365 grams in its later stages, would serve as a heavy weight rhythmically pounding the diaphragm and injuring the pleura. It would explain the chest pain and dyspnea experienced by the patient. Pleural effusion can obscure the underlying cyst on a routine chest x-ray, but a CT scan provides a means to clearly identify the cyst with fluid density and the thin walled rim. In this case, the weight of fluid in an expanding cyst likely irritated the adjacent pleural surfaces leading to development of a pleural effusion.

Conclusion

Bronchogenic cysts are rare and pleural effusion in association with an intact intra-parenchymal bronchogenic cyst has not been described previously. When the common etiologies of pleural effusion are eliminated, bronchogenic cyst should be considered as a rare cause of pleural effusion

Acknowledgments

The author thanks Maurice A. Mufson, M.D., M.A.C.P., for his assistance in reviewing the manuscript.

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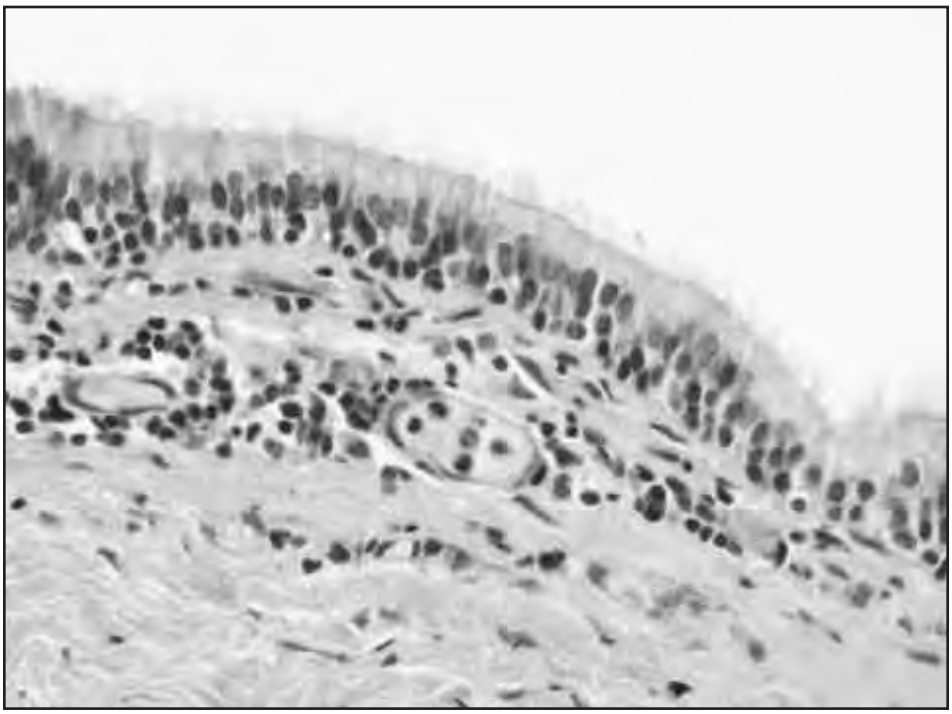
Figure 3.
Pathologic examination showing respiratory-type epithelium with mild chronic inflammation and fibromuscular wall revealing islands of cartilage and submucosal glands



Moyamoya in a Non-Asian Patient: A Case Report and Review of the Literature

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Abstract

Moyamoya disease (MMD) has historically been diagnosed in the Japanese population. However, newer studies have demonstrated worldwide distribution. Of note, patients of Appalachian descent with no known Asian ancestry have presented with MMD. We are presenting a case of MMD in an Appalachian, non-Asian patient who presented to the neurosurgical service with a severe headache of four days duration. The patient was found to have multiple hemorrhagic infarcts on CT and was admitted to the ICU. Cerebral angiography findings confirmed the diagnosis of MMD. Our case provides information regarding signs and symptoms, diagnostic neuroimaging findings, and treatment modalities for MMD.

Case Report

CHIEF COMPLAINT

Headache

HISTORY OF PRESENT ILLNESS

D.B. is a 46-year-old Caucasian female of Appalachian descent who presented to the Emergency Department (ED) with an unremitting headache of four days duration. Headache came on suddenly after moderate physical activity. Headache was described as severe, global and continuous and dull. The patient took over-the-counter NSAIDs and rested for four days but did not experience relief of her symptoms. She went to the ED after the fourth day of unrelenting headache. Additional complaint was difficulty walking from lower extremity weakness. CT without contrast was performed upon admission that revealed moderate intraventricular hemorrhage, small intraparenchymal hemorrhage, and mild subarachnoid hemorrhage.

PAST MEDICAL HISTORY

Multiple sclerosis
Major depressive disorder
Seizures
Post-surgical thrombophlebitis
Appendectomy
Total hysterectomy

SOCIAL HISTORY

Cigarette smoking – 1 pack per day for 20 years
Three cups of coffee per day

MEDICATIONS

Citalopram 40mg by mouth 1 tablet every night
ROS: Negative per HPI

PHYSICAL EXAM

Patient was intact neurologically. She was alert and oriented to person, place, and time. Cranial nerves 2-12 were grossly intact. Strength was rated 5/5 in upper and lower extremities. No sensory deficits to pin prick and light touch. Reflexes were 2+ in four extremities. No dysmetria and dysdiadochokinesia present.

TREATMENT PLAN RENDERED:

The patient was admitted to the ICU. She received an angiogram to localize areas of hemorrhage. Angiogram showed bilateral occlusion of the middle and anterior cerebral arteries, with mild stenosis of the left and right common carotid arteries. Rete mirabile – numerous bilateral collaterals and tangled, malformed arteries secondary to increased collateral flow was demonstrated. Because she was neurologically intact and presented late in the disease course, medical management was the agreed upon treatment. Surgical management via revascularization was considered not appropriate because of the patient's well-developed collateral circulation. The patient was counseled about MMD and instructed to modify vascular risk factors, including smoking cessation and proper diet and exercise behaviors. She was discharged home when headache abated and was later seen in clinic for follow-up.

Discussion

Our patient is a middle-aged female who presented with an acute intracranial hemorrhage. She is Caucasian and Appalachian with no known Asian ancestry. The patient presented to the ED after enduring a four-day headache. She complained of weakness in her extremities but denied other symptoms. Her prior history of seizures and migraines could be attributed to minor hemorrhagic causes.

MMD is derived from the Japanese word "puff of smoke" due to the appearance of numerous collateral vessels seen on angiography. In addition to multiple collaterals, bilateral occlusion occurs in the terminal segment of the internal carotid.[1] MMD tends to be bimodal, affecting children around 5 years

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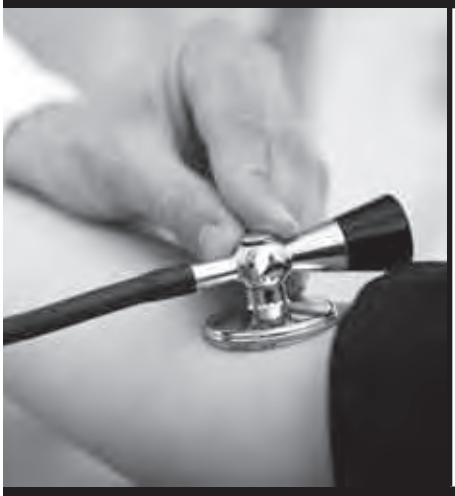

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Figure 1.
Presence of intraventricular hemorrhage

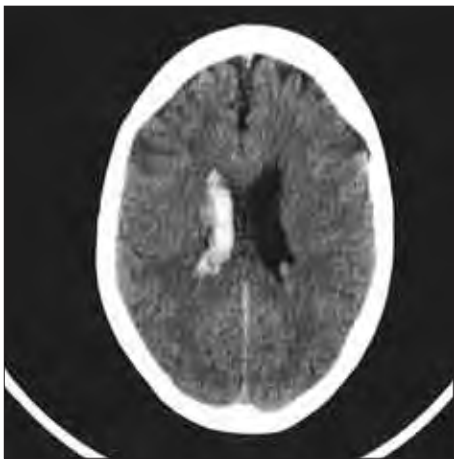


Figure 2.
Note increased collateral circulation on CT-Angiogram

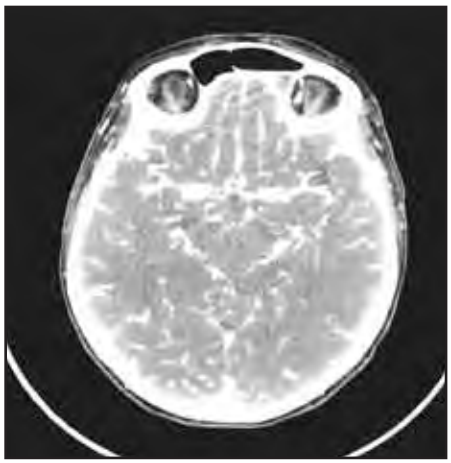
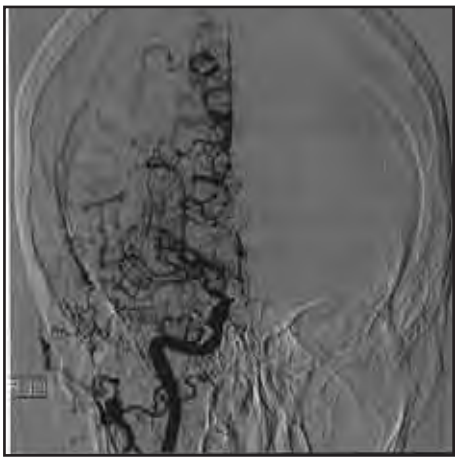


Figure 3.
Stenosis of supraclinoid Internal Carotid Artery



of age and adults around 40 years of age.[13-16] Children present with transient ischemic effects exacerbated by hyperventilation.[6] In addition, children may present with seizures or choreiform movements due to basal ganglia involvement.[18,19] Adults present with altered mental status due to intraventricular or intraparenchymal bleeding, however research suggests ischemia may be observed in the majority of all patients, regardless of age.[6,12] Headache, similar to migraines, is a common symptom of MMD as a result of dural nociceptor stimulation from vessel dilation.[17]

Several risk factors for the disease have been proposed including, Trisomy 21, Neurofibromatosis 1, history of radiation to head and neck, and various forms of cerebrovascular inflammatory disease.[7] Etiology of MMD remains unclear, however elevated levels of basic-fibroblast growth factor (b-FGF) are found in the CSF of MMD patients. Increased activity of b-FGF and its receptor in the superficial temporal artery imply angiogenic and cytokine participation in the disease process.[6] Familial MMD may be linked to genetic loci of chromosomes 3, 6, and 17.[6]

The gold standard for diagnosing MMD requires catheter cerebral angiography. Cases should meet the following findings:

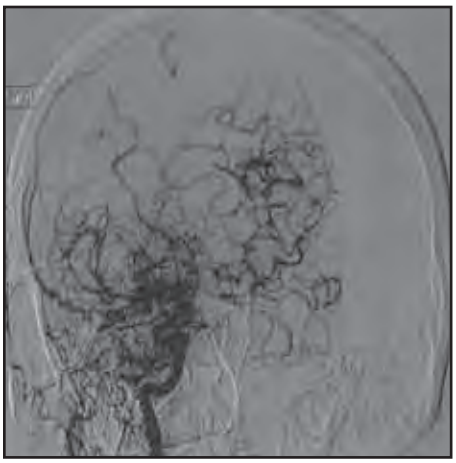
1. Bilateral symmetrical stenoses or occlusion of the terminal internal carotid arteries and proximal portions of the anterior and/or middle cerebral arteries.
2. Several enlarged lenticulostriate and thalamoperforating arteries (this criterion demonstrates "puff of smoke" appearance).
3. Several transdural, leptomeningeal, and pial collateral vessels.[6,9]

Bilateral involvement is considered a definite case, however unilateral involvement affects the contralateral side in 40 percent of patients.[21,22] CT and MRI illustrate multiple infarcts in more than 80 percent of patients, with intraventricular hemorrhage encountered most often. In addition, PET scan shows decreased cortical blood flow from narrowed of cerebral blood vessels.[9]

At this time, no medical therapy has been established to alter progression of MMD.[12] Anti-platelet therapy can reduce ischemic symptoms of emboli formed at sites of stenosis, and calcium channel blockers can abort headache and may reduce future transient ischemic attacks.[12] Surgical management is performed to increase cerebral blood flow. A recent review of surgical management concluded that direct bypass surgery (STA-MCA anastamoses) or indirect bypass surgery (laying a vascularized soft-tissue flap on the brain surface) improves revascularization.[11] These interventions can prevent further ischemic or hemorrhagic events.

Once considered a disease exclusive to Asian patients, MMD is now observed in American and European populations. Rates in America are reported to be 0.086 cases per 100,000 persons.[20] The age distribution is bimodal – seen at five years of age and in the mid-40's.[13-16] Adults are seven times more likely to have hemorrhage than children. Consequently, we encourage physicians to include MMD as part of their differential in patients

Figure 4.
"Puff of smoke" appearance



with hemorrhagic or ischemic events, particularly in younger patients, regardless of ancestry.

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Hepatitis C (HCV) Treatment is Not a "One Size Fits All"

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Abstract

During the past ten years, there has been a remarkable increase in the number and spectrum of medications used for the treatment of viral hepatitis infections including the hepatitis C virus infection (HCV). Still there is considerable variability among physicians in the use and duration of treatment of the currently available medications. Therefore, the current literature on the HCV therapy will be reviewed and summarized.

Introduction

The hepatitis C virus is a major public health problem, and a leading cause of chronic liver disease.[1] With more than 180 million people infected worldwide, and more than 4.5 million Americans infected with the hepatitis C virus; it is no wonder that chronic Hepatitis C viral (HCV) infection is a significant public health issue not only in the USA but worldwide.[2]

The Hepatitis C virus is a RNA virus which is transmitted via infected blood and body fluids (examples of exposure risk would be: blood transfusion or organ transplant before 1992, intravenous drug use, snorting drugs, sexual exposure, and tattooing); as such there is no need for HCV-infected persons to limit ordinary household activities except for those that might result in blood exposure, such sharing a razor, nail-clipper, or toothbrush. The hepatitis C virus is not transmitted by hugging, kissing, sharing of eating utensils or breastfeeding.

Infection with the hepatitis C virus (HCV) can result in both acute and chronic hepatitis. Acute HCV is usually asymptomatic and rarely causes liver failure. On the other hand, chronic HCV is the aftermath of an acute infection, with eighty to one hundred percent of patients remaining HCV-RNA positive, and sixty to eighty percent developing chronic HCV with persistently abnormal liver enzymes [elevated AST and ALT]. The current recommended therapy for chronic HCV infection is the dual therapy consisting of the combination of pegylated interferon alfa and ribavirin.

Methods

A literature search was performed from 2000 to December 2009, using the computerized PubMed database, looking for English publications regarding Hepatitis C viral (HCV) infection and its available medications and treatment options. The most up to date treatment and recommendations were reviewed and the results are hereby summarized. In addition the most recent practice guidelines set forth by the American Association for the Study of Liver Diseases (AASLD) were reviewed.

Whom to treat?

All individuals with chronic hepatitis C (HCV) infection should be offered therapy, if there are no contraindications for it (Table 1). Therefore, all patients presenting to their doctor with abnormal LFT who are HCV-RNA positive by PCR should be offered therapy.

Infection with evidence of active liver inflammation should be confirmed by liver biopsy (Bx); as all other tests including ALT levels and viral titers are not reflective of the actual inflammation in the liver or presence of liver fibrosis/cirrhosis.

There are certain contraindications to treatment; Table 1 below shows conditions or situations where therapy is currently contraindicated:[2]

What determines patient's response to treatment?

Response to treatment is dependent on a number of host (patient) factors and viral factors.[3]

Patient factors include age, gender, alanine aminotransferase (ALT) levels, amounts of iron deposits in the liver, stage of fibrosis, insulin resistance, and the patient's genetics. Recent work by Ge et al. shows that a specific polymorphism located close to the gene, which codes

Table 1: Contraindications for HCV Therapy

1. Known hypersensitivity to drugs used to treat HCV
2. Age less than 2 years
3. Major depression or uncontrolled psychiatric health issues
4. Autoimmune hepatitis or other autoimmune conditions known to be exacerbated by HCV therapy
5. Untreated thyroid disease
6. Pregnancy or unwillingness to comply with adequate contraception
7. Solid organ transplant (lung, heart, or kidney)
8. Severe concurrent medical disease such as severe hypertension, heart failure, significant coronary artery disease, poorly controlled diabetes, chronic obstructive pulmonary disease (COPD)

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for interleukin 28B [IL-28B], was demonstrated to strongly influence SVR with the cure rate being twice as high if you have the CC allele.[4]

Viral factors include HCV genotype, and viral load namely serum concentrations of HCV RNA at the time of initiation of antiviral therapy.

There are three terms that are frequently used when referring to the results of HCV therapy; these are RVR, EVR, and SVR. RVR is Rapid Virologic Response at 4 weeks of therapy; EVR is Early Virologic Response at 12 weeks of therapy, and SVR which is Sustained Virologic Response at 6 months after therapy.

Response is determined by testing the patient at four, twelve, and 24 weeks by ordering both hepatitis C PCR qualitative as well as hepatitis C quantitative viral load by PCR. If the qualitative test is negative, that would be a positive response, and if there was a 2-log drop in the viral load, that would constitute a positive response as well (meaning that patient is responding to therapy).

Is one product better than the other?

Current treatment for hepatitis C infection consists of combination therapy using pegulated interferon plus ribavirin.

Both available peg-Interferon products [Pegasys: peginterferon alfa-2a; Pegintron: peginterferon alfa-2b] that are available on the market are equally efficacious with similar side effects.[2-5]

The most common side-effects that we should look for are: neuropsychiatric side-effects including anxiety and depression, flu-like symptoms, fatigue and muscle aches, skin rashes and irritation (which respond very well to topical steroids), thyroid derangement (both hyper- and hypo-thyrodism), hemolysis with ribavirin, and bone marrow suppression with interferon.

The dose of interferon can be adjusted according to the degree of bone marrow suppression, but once the platelet count has dropped below 50,000 or the absolute neutrophilic count [ANC] has dropped below 500, then treatment should be withheld. The medication insert that comes with each of these drugs has a detailed schedule that can help guide the dose adjustments of these medications and/or a call to your gastroenterology colleague.

Duration of therapy?

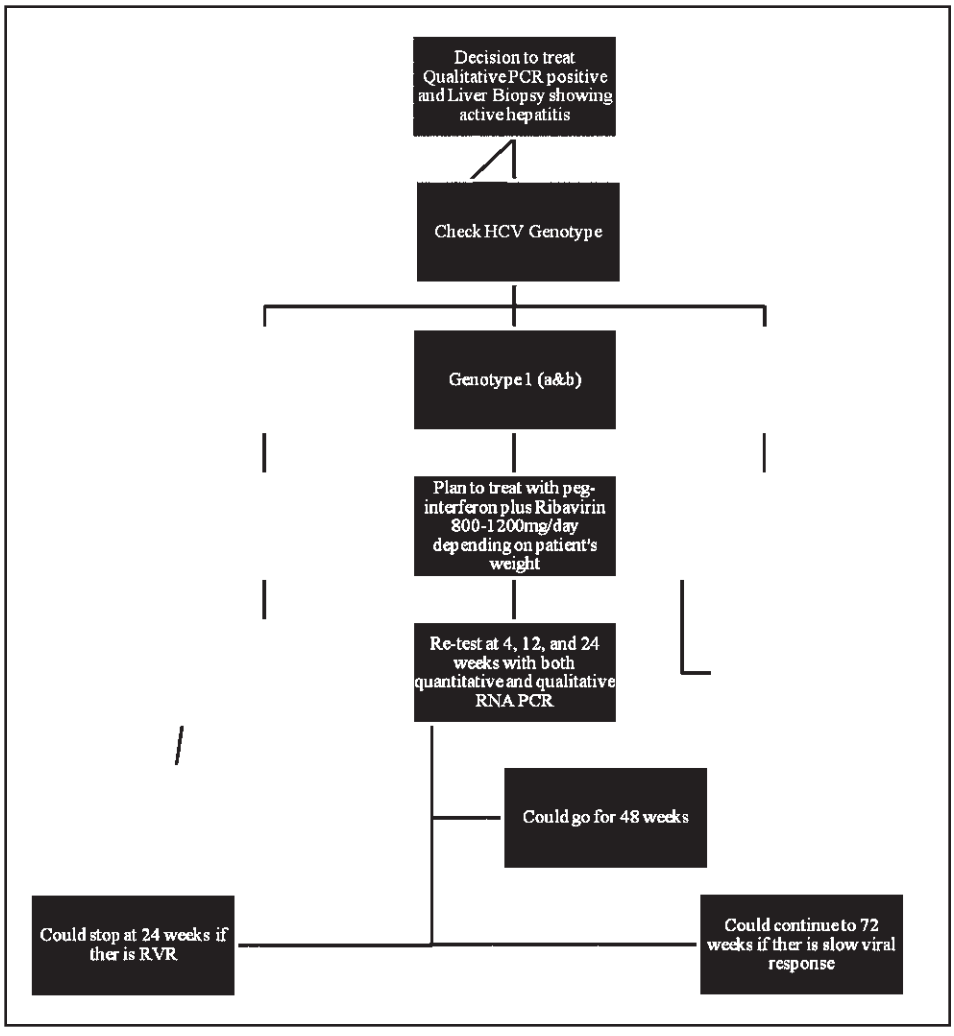
The initial determinant factor for the tentative duration of treatment is the viral genotype: whether HCV genotype 1,2,3,4,5, or 6.

After treatment has been initiated the factor that predicts long term response (sustained virologic response "SVR") is the initial response to treatment (the Rapid Virologic Response "RVR").

HCV viral genotypes 2 and 3 are treated with peg-interferon plus ribavirin (800 mg daily) for 24 weeks. If there is a RVR at 4 weeks of therapy, then shortening the duration of therapy to 12 weeks can be considered. If the treatment is well tolerated, recommend the full course for 24 weeks.

For HCV genotypes 1, 4, 5, and 6, it is recommended that ribavirin is dosed based on patient's weight (kg):

Figure 1.
HCV Treatment Options and Duration of Therapy



if patient weighs less than 75kg, then 800mg/daily as 400 bid is utilized; however, if the patient weighs more than 75kg, then 1000mg should be used daily, given in two divided doses: 400 in the morning and 600 at night. If the patient weighs more than 100kg, the maximum dose of ribavirin of 1200mg/daily could be attempted with careful monitoring of the CBC.

For HCV genotype 1 (most common in the US); if there is a RVR, the duration of therapy can be shortened to 24 weeks instead of 48 weeks. If there is a slow viral response (meaning that the qualitative PCR becomes negative at 24 weeks rather than 12 weeks, or if there is a two-log drop in the viral titer but the qualitative test is still positive at 12 weeks) then it is recommended that the duration of treatment be extended to 72 weeks (Figure 1).

Preceding therapy, patients, both male and female should be counseled to prevent pregnancy during and up to six months after therapy. Furthermore, all patients should have a baseline evaluation that includes the following:

a) Psychiatric evaluation and clearance. If patient is taking anti-depressants, require four weekly follow-ups to their psychiatrist for the duration of therapy.
b) Baseline retinal examination by an ophthalmologist, due to the effects of interferon.
c) Blood work should include CBC with differential, LFT, KFT, and TSH.

During therapy, a weekly CBC for the first month and every four weeks thereafter should be maintained. Any change in the dosage of either ribavirin or interferon should revert patient to a weekly cycle until blood counts are stable.

What new therapies are coming?

The investigational agents for HCV infection can be divided into three areas:

a) Treatments targeting HCV-encoded proteins.
b) Treatments targeting host-encoded proteins.
c) Therapeutic and preventive vaccines.

In addition, there are ongoing discussions among the liver experts about triple therapy rather than dual therapy. There are some promising reports with triple therapy using interferon, ribavirin, plus nitazoxanide "an anti-protozoal drug" or triple therapy with interferon, ribavirin, plus one of the protease inhibitors such as Telaprevir or Boceprevir; and or the addition of the antiviral agent Silibinin.[6-15]

Telaprevir and Boceprevir are protease inhibitors which belong to a class of agents known as DAA's (Direct-Acting Anti-virals), and are the two products currently in phase three development. Hopefully, these medications will soon be available on the market.[16] Once these products are readily available, they will be used in conjunction with ribavirin and peginterferon for the initial 8 to 12 weeks of therapy followed by another 12 weeks of ribavirin and peginterferon if necessary. Due to their excellent anti-viral effects, many physicians are withholding therapy for newly diagnosed HCV patients till these drugs are available on the market.

Summary

The take home message is that it is our duty as treating physicians to keep people on therapy by eliminating drop-outs, keeping in mind that it is no longer acceptable to think of genotype 1 and 4 as "difficult to treat" or that genotype 2 and 3 are "easy to treat". Treatment should be tailored to the specific patient and to the specific virus that infected that particular patient.

Although the genotype is an important driver of response and is useful in designing the initial treatment plan, it is clear that once treatment is initiated, RVR is the most important and powerful predictor of SVR.[3]

It is our opinion that HCV is a potentially treatable disease, but treatment is not a "one size fits all", but rather should be tailored and individualized for each patient. However, if there is a response at week four of therapy [RVR], treat the patient for 24 weeks only, regardless of the genotype. If there is a response at week 12 of therapy [EVR], treat for 48 weeks, regardless of the genotype. If there is a response at 24 weeks of therapy [Slow Virologic Response], treat for 72 weeks regardless of the genotype.

Chronic HCV is a potentially treatable disease with the following response rates "Sustained Virologic Response":

a) SVR of approximately 70---75% if RVR is achieved
b) SVR of approximately 55---63% if EVR is achieved
c) SVR of approximately 30---33% if there was a Slow Viral Response

The most recent and detailed recommendations about treatment of HCV can be found in the American Association for the Study of Liver Diseases (AASLD) practice guidelines that were published in the Hepatology Journal in April 2009, (2); or at their web site: www.aasld.org/practiceguidelines.

Since the preparation of this manuscript, Incivek [Telaprevir] and Victrelis [Boceprevir] have become available on the market for the treatment of Hepatitis C Genotype 1 as triple therapy-

using one of them in addition to ribavirin and pigulated interferon.

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Acromegaly Caused by Growth Hormone Releasing Hormone (GHRH) Secreting Tumor in Multiple Endocrine Neoplasia (MEN-1)

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Abbreviations

MEN-1: Multiple endocrine neoplasia type 1, NECT: Neuroendocrine tumor, GHRH: Growth hormone releasing hormone, GH: Growth hormone, IGF-1: Insulin like growth factor.

Abstract

We are presenting the clinical features, diagnostic work up and treatment of acromegaly caused by Growth hormone releasing hormone (GHRH) secreting neuroendocrine tumor (NECT) in a case of multiple endocrine neoplasia type 1(MEN-1).

A 36 year old man, known case of MEN-1 presented with acromegalic features. He has high IGF-1, GH and very high GHRH levels with a pancreatic head tumor and pituitary mass. He had high GHRH arteriovenous gradient across pancreatic tumor and underwent tumor resection, Post operative GHRH level fell dramatically. Tumor had high GHRH m-RNA level.

Acromegalic patients with MEN-1 should be screened for ectopic GHRH secretion. Measurement of GHRH arteriovenous gradient across NECT or mRNA for GHRH in resected tumor can confirm the ectopic source. Treatment of choice is surgical resection of the tumor. Somatostatin analogue is an alternative because of its dual action in the pituitary gland and the NECT. Life long surveillance is needed as recurrence chance is high.

Introduction

Multiple endocrine neoplasia type 1 (MEN-1) is defined as presence of any two tumors out of the following; parathyroid, neuroendocrine tumor (NECT) and pituitary neoplasia.[1] Hypersecretion of growth hormone releasing hormone (GHRH) is rare manifestation of NECT; however half of such cases are found with MEN-1.[2] Incidence rate of acromegaly with GH over secretion is up to 15% in MEN-1 pituitary tumors similar to non-MEN-1 pituitary tumors.[3]

There are two different etiologic mechanisms of acromegaly caused by excess GH in MEN-1 with different treatment implications. Mostly it is due to pituitary adenomas, which arise clonally from inactivation of both alleles of the MEN-1 gene in a tumor precursor cell.[4] The second mechanism is overproduction of GHRH by NECT including pancreatic islet[2] or carcinoid tumor leading to polyclonal and hyperplastic pituitary gland with over production of GH.

In this report, we describe a case of acromegaly, in a patient

Figure 1.
Contrast enhanced CT scan of abdomen. Arrow indicating pancreatic head tumor.

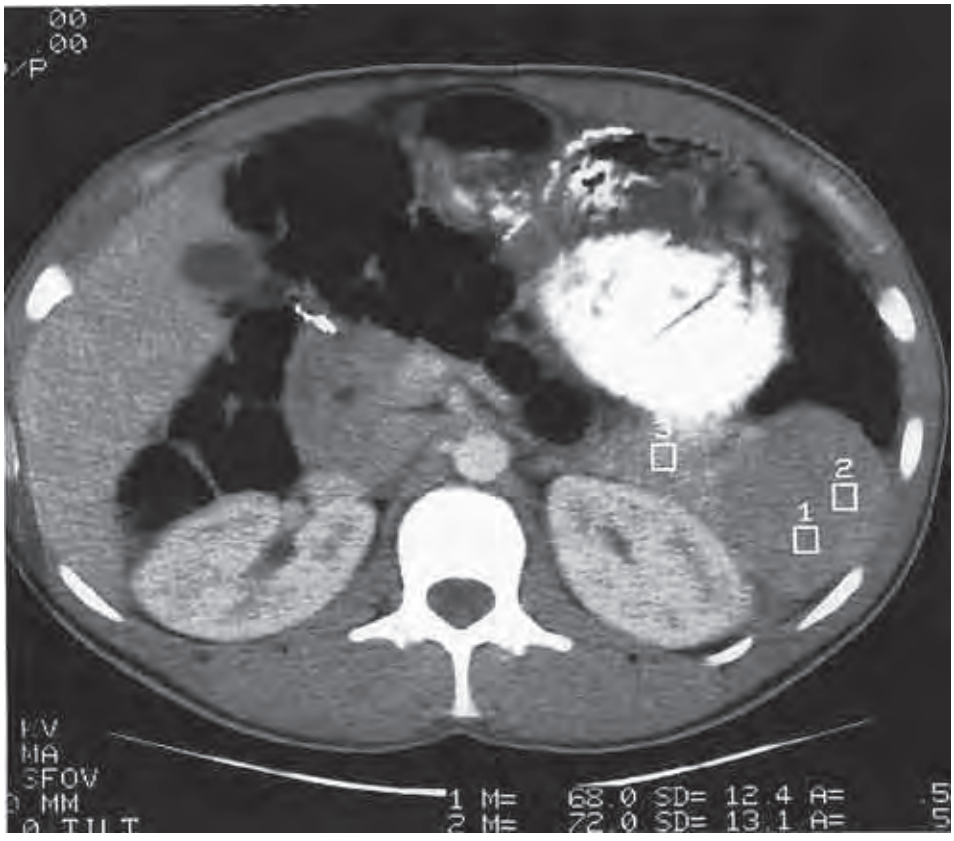

Table-1 Confirmation of GHRH hypersecretion by tumor causing acromegaly

Biochemical Features	Normal Range	Pre-Operative	Post-Operative
IGF-1	(114-449) ng/ml	1500 ng/ml	761 ng/ml
GH	(2-5) ng/ml	93 ng/ml	7.9 ng/ml
Peripheral vein GHRH	(<50) pg/ml	4800 pg/ml	42 pg/ml
Splenic vein GHRH	NA	289000 pg/ml	-
m-RNA for GHRH in resected tumor	NA	235000 pg/mg	

with MEN-1 with emphasis on screening for GHRH secreting tumors in MEN-1 patients with acromegaly, confirmation of the diagnosis, treatment options and importance of life long surveillance.

Case Report

A 36 year old man presented with increase in hand and shoe size, excessive sweating, tingling and numbness in his hands. He had been recently diagnosed with carpel tunnel syndrome. He belongs to known MEN-1 kindred. He was diagnosed with MEN-1 ten years ago.

He had hyperprolactinemia (initial prolactin level of 2470 ng/ml (2.5-17 ng/ml) and a 2.5 x 2.5 x 2.0 cm pituitary mass) which responded well to cabergoline with near normalization of prolactin (50 ng/ml) and significant shrinkage of pituitary mass. He also had hypercalcemia due to primary hyperparathyroidism.

A screening CT scan of pancreas five years ago had revealed 7.8 x 6.2 x 6.2 cm mass in the head of pancreas (Fig-1). Endocrine testing showed normal gastrin, VIP, pancreatic polypeptide and 24 hour urine 5-HIAA levels. The mass was being conservatively monitored.

Physical examination showed coarse facial features, loss of nasolabial fold, acral enlargement, swollen inter-digital spaces and multiple skin tags.

Table 2. Clinical Effects of Acromegaly

Local Tumor Effects	Somatic Effects	Endocrine and Metabolic Effects
Cranial nerve palsy **Headache** **Pituitary enlargement** **Visual field defects**	**Acral Enlargement-**thickness of hands and soft tissue **Cardiovascular-**Asymmetric septal hypertrophy, Left Ventricular Hypertrophy, HTN, CHF, Cardiomyopathy **Gastrointestinal**-Colonic Polyps **Musculoskeletal -** Acroparasthesias, proximal Myopathy, prognathism, gigantism, carpal tunnel syndrome, frontal bone prominence, arthralgia, jaw malocclusion **Pulmonary** - Narcolepsy, Sleep Apnea-Central and Obstructive **Skin** – Hyperhydrosis, Skin tags **Visceromegaly** - Kidney, liver, prostate, thyroid, tongue, salivary gland, spleen	**Carbohydrate** - Diabetes Mellitus, Impaired Glucose Tolerance, Insulin Resistance and Hyperinsulinemia **Electrolytes** - Increased Aldosterone, Low Renin **Lipids** - Hypertriglyceridemia **Minerals** – Hypercalciuria, Increased 1,25 (OH)2 D3,Urine Hydroxyproline **Neoplasms** - MEN-1, Hyperparathyroidism, Islet Cell Tumors **Reproduction**- Galactorrhea, menstrual abnormalities, decreased libido, impotence, low Sex Hormone Binding Globulin **Thyroid** - low Thyroxine Binding Globulin, Goiter

Modified from Bonert V, Melmed S. Acromegaly. In Bar RS, ed. Early Diagnosis and Treatment of Endocrine Disorders (Contemporary Endocrinology). Totowa, NJ: Humana Press, 2002:201-228.

Laboratory data showed IGF-1 1500 ng/ml (114-449 ng/ml), GH 93 ng/ml (2-5 ng/ml), calcium 11.3, intact PTH 84 pg/ml (11-54).

Repeat MRI of head showed 2.2 x 1.8 x 1.8 cm pituitary tumor which had increased in size compared to previous study. GHRH level 6969 pg/ml (<50 pg/ml) was found to be very high.

GHRH arteriovenous gradient across the pancreatic tumor was measured. Left radial vein GHRH level was 4800 pg/ml while splenic vein GHRH level was 289000 pg/ml. He underwent pancreatic tumor resection. Hormonal profile showed significant drop in IGF-1 761 ng/ml, GH 7.9 ng/ml and GHRH 42 pg/ml after surgery. A170 mg of tumor extracted for m-RNA which revealed 235000 pg/mg of GHRH. (Table 1)

Since then he has normal GH and GHRH levels and normal IGF-1 values.

Discussion

In acromegaly, the overproduction of GH is mostly caused by pituitary adenoma; the frequency of GHRH hyper secretion causing acromegaly is estimated to be less than 1%.[5,6] Ectopic GHRH secretion usually originates from NECT, commonly from a bronchial carcinoid or enteropancreatic NECT.[7] Rarely ectopic GHRH from thymic tumors, small cell lung cancer, adrenal adenoma and pheochromocytoma have been reported.[8]

Clinical (Table 2) and biochemical features of acromegaly, including high IGF-1, GH levels and non-suppressible GH response to oral glucose load, are often indistinguishable between GH-producing pituitary adenoma and ectopic GHRH producing tumors. Serum GHRH concentration is a reliable method to differentiate between GHRH induced acromegaly and acromegaly from a pituitary adenoma (classic acromegaly).[5,6] Plasma GHRH levels are strikingly high (above 300 pg/ml) in ectopic GHRH induced acromegaly whereas in classic acromegaly; GHRH levels are usually undetectable but occasionally mildly elevated (less than 300 pg/ml).[5,9] GHRH induced acromegaly exhibits mild hyperprolactinemia due to hyperstimulation of pituitary lactotroph cells by GHRH, as seen in human GHRH transgenic mice.[10]

Specific dynamic tests (TRH stimulation, GHRH stimulation and oral glucose suppression) do not differentiate the above two types of acromegaly with certainty, and have produced variable results.[11]

The criteria for definitive diagnosis of ectopic GHRH production has been described as high levels of circulating GHRH, an arteriovenous concentration gradient of GHRH in the region of the tumor, presence of GHRH or mRNA of GHRH in the tumor or significant decline of GHRH, GH

Table 3. When to suspect GHRH dependent acromegaly?

Indications for measurement of GHRH levels in acromegaly
1. Known case of multiple endocrine neoplasia (MEN-1)
2. Family history of multiple endocrine neoplasia (MEN-1)
3. Presence of known neuroendocrine tumor (NECT)
4. Co-existence of hyperprolactinemia and acromegaly
5. Absence of classic pituitary adenoma in MRI (either normal or hyperplastic pituitary gland)

and IGF-I levels after removal of the tumor to near normal.[11,12] Our case met almost all these criteria.

Neuroimaging studies of the hypothalamic pituitary gland in ectopic GHRH induced acromegaly have provided variable results, from no tumor to slight enlargement or well defined pituitary mass.[9] Histopathology specimens of Pituitary glands from GHRH induced acromegaly have shown a continuum of hyperplasia to adenoma and adenomatous transformation can be found on a background of hyperplasia.[9]

As MEN-1 patients can have both pituitary tumors and NECT, it seems reasonable to screen all MEN-1 patients with acromegaly for ectopic GHRH induced acromegaly (Table 3). Serum GHRH levels can be used as an initial screening test.

Previously reported GHRH secreting NECT were usually large enough to be seen on CT scan of abdomen and chest respectively. Octreotide scintigraphy can be useful in detecting the tumors that have rich somatostatin receptors[9,13,14] but the test is not definitive.

Surgical removal of the GHRH producing tumor is the therapy of choice for ectopic GHRH induced acromegaly.[9] In case of an inoperable tumor, high surgical risk or unsuccessful surgery, GH hypersecretion can be controlled either by pituitary surgery or pituitary radiation. Another alternative is medical treatment. Dopamine agonist therapy has variable effect on GH and IGF1 levels but doesn't affect GHRH levels or tumor size.[9] Long acting somatostatin analog octreotide can inhibit GHRH secretion from NECT as well as GH secretion from anterior pituitary gland directly. It can reduce GH and IGF1 levels at relatively lower doses, but higher doses are required for suppression of GHRH levels, shrinkage of the primary tumor and reduction of secondary pituitary enlargement.[9, 13,14]

Although commercially not available, GHRH antagonists have shown to effectively decrease GH secretion in ectopic GHRH induced acromegaly on experimental basis.[15] When potent GHRH antagonists will become commercially available, it might be the most suitable therapeutic option for this rare disease.

CONCLUSION

Patients with acromegaly and MEN-1 should be screened for ectopic GHRH secretion.

Measurement of GHRH arteriovenous gradient across NECT, measurement of GHRH or mRNA for GHRH in resected tumor and post operative decline in GHRH level can confirm the ectopic source. Surgical removal of the GHRH secreting tumor is the treatment of choice. Medical therapy with Somatostatin analog is an alternative for surgically unsuitable patients.

Lifelong surveillance for recurrence of tumor and acromegaly should be continued with GHRH and IGF-1 levels.

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Physician-Patient Communication: Breaking Bad News

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Abstract

Physicians often struggle with how to manage the task of breaking bad news with patients. Moreover, the arduous nature of the task can contribute to physician detachment from the patient or an avoidance of breaking the news in a timely manner. A plan of action can only improve physician confidence in breaking bad news, and also make the task more manageable. Over a decade ago, Rabow and McPhee offered a strategy; the ABCDE plan, which provided a patient centered framework from which to deliver troubling news to patients and families. At the heart of this plan was the creation of a safe environment, the demonstration of timely communication skills, and the display of empathy on the physician's part. Careful consideration of the doctor's own reactions to death and dying also played an important role. A close review of the five tenets of this plan indicates the relevance of Rabow and McPhee's strategy today. The patient base in our nation and state continues to be older, on average, and physicians are faced with numerous patients who have terminal illness. A constructive plan with specific ideas for breaking bad news can help physicians effectively navigate this difficult task.

Background

Breaking bad news is an arduous task for seasoned and neophyte physicians alike. Physicians, not unlike other professionals, tend to avoid tasks for which they feel they are untrained or unprepared to perform. Thus, some physicians make the mistake of putting off bearing bad news until they absolutely have to provide it. Making matters worse, for some physicians, there is a tendency to disengage from patients as they learn bad news.[1] Thus, at a time when patients need the greatest support, their doctors may unwittingly leave them on their own. The reasons for this may be due to: a) feeling unprepared; b) anticipation of an unpleasant reaction (e.g., anger) by the patient and/or family members; c) confusion over how much information should be given and at what time it should be communicated; d) lack of time to deliver bad news and process patient/family options. Thus breaking bad news is a major obstacle for most physicians. Therefore, how can physicians deliver bad news more effectively?

The ABCDE Model

Rabow and McPhee[2] provided a succinct and powerful framework to use when delivering bad news. The mnemonic is ABCDE. The A stands for advanced preparation. This helps to assist the physician with some of the time demands and some of the "what if" questions that may arise prior to the meeting with the patient and the family. The B stands for building a therapeutic environment. In order to properly discuss the patient's situation, the physician needs to arrange a situation where people can talk freely and openly. The C denotes communicating well. Research indicates that patients desire open communication regarding their condition,[3] provided that it is compassionate. The D refers to dealing with patient and family reactions to bad news. While this refers to the "normal" reactions that family members may have, it also includes the sometimes overlooked idea that not everybody, or everybody's family, deals with bad news in the same way. The E denotes encouraging and validating patient and family emotions. This is often the most important overlooked component as families and patients may feel that their feelings about the bad news are being sidestepped for other, seemingly more pertinent issues related to the bad news.

Advance Preparation

The first step in breaking bad news is advance preparation for the meeting with the patient and family. While most physicians are quite busy, it is nonetheless recommended that 15-30 minutes be set aside for the meeting. This does not include the time needed to arrange for the private room and to review all germane clinical records. Physicians should arrange for no interruptions by turning cell phones and pagers to silent mode. In addition, staff at the clinic or hospital should be told not to disturb the meeting unless it is an emergency. Finally, if the news

Table 1. Breaking Bad News Framework

ABCDE Mnemonic	
A	Advance Preparation
B	Build therapeutic environment / relationship
C	Communicate well
D	Deal with patient / family reactions
E	Encourage and validate emotions

Adapted from Rabow, MW, McPhee, SJ. Beyond breaking bad news: how to help patients who suffer. West J Med. 1999; 171: 260-263.

is delivered in a hospital room, the door to the room should be closed as should the curtain toward the other side of the room if the meeting occurs in a shared hospital room. Bad news is difficult enough without an unintended audience or other distractions. Advance preparation can assure that patients and doctors have ample preparation, time, and space to deal with the taxing task at hand.

Building a Therapeutic Environment

Building a therapeutic environment is more difficult than the phrase might imply. Chief among the goals of a therapeutic environment is support. The patient will likely have family members or friends whom they wish to participate for moral and emotional support. In addition, the physician may opt to have clergy or a counselor available depending on the severity of the bad news being delivered. However, not all patients want to have others present. The best approach is to ask about the patient's wishes. A good exchange could include the following:

"I have some news that I wish to share with you. Whom would you like to be with you when we talk about it?"

While we might assume that the patient needs the family, we need to respect his or her wishes to include, or exclude whomsoever he or she desires. The patient needs to be our guide. At times a patient may not wish to know the bad news. If a patient refuses a meeting, one can wait until later in the day or the next day, depending on the urgency.

The final step is to start the session with an introduction and a "warning shot." The introduction lets the family members know who the physician is. An example of this might be:

"Hello, I am Dr. Wilson, Mrs. Johnson's family doctor."

A warning shot after the introduction will help prepare the family and the patient for the news that is about to come. While it is likely that they know that a meeting is rarely for good news, it still is helpful to soften the blow with some well chosen words, such as:

"I have gathered you all because I have some difficult news."

"I regret to say that I have some tough news for you all."

"I am sorry to say I have some bad news to share."

Communicating Well

The next task in breaking bad news is communicating well with the patient (and family). Even in the present era of high technology

and e-charts, a physician still needs to value effective communication as a tool to help the patient cope with medical issues. Further, the teaching of communication skills is now recognized in residency as it is one of the six core competencies set forth by the Accreditation Council for Graduate Medical Education (ACGME).[4] At no time are these skills more important than when a physician must deliver bad news to a patient and that patient's family.

Prior to describing the bad news, it is important to see what a patient and that patient's family knows. Sometimes the patient and the family will already sense that something serious is wrong. A good idea is to frame the question in an open-ended way to generate discussion. An example might be, *"What do you know about your medical (health) condition?"* Once this question is asked, some time should be given to process the answer, if indeed one is provided. The patient may have a variety of responses to this question from "*I don't know anything*" to "*I think I have cancer.*" Regardless of the response, time and silence are key aspects in this portion of the process.

When communicating bad news, a physician should be as patient and methodical as possible in discussing the illness. The patient will need some time to process what has been said. Rushing the news will likely impede that process. In addition, it might be a good idea to write a few key notes down for the patient to have for later when others ask questions or when they want to revisit the news. Ample time should be allowed for questions and discussion. It also is a good idea to ask the patient to recall what they heard so we know what we said was understood. On rare occasions, the patient may ask the physician to stop. If this occurs, it is important to honor this wish. The news can be given later, when the patient is better prepared to hear it.

One potentially awkward piece of breaking bad news is dealing with silence. Physicians may feel that they need to fill in the space of the discussion but that is typically unnecessary. Again, time to process the news is essential and silence will help provide that. If the silence goes for over 30 seconds, a comment may be made. One example might be:

"I know this news is difficult and it sometimes takes time to set in."

This can fill some of the silence and normalize patient and family reactions to bad news.

Finally, a physician needs to be prepared to practice good nonverbal and verbal communication skills. Nonverbal skills such as maintaining an active posture can help the family to see that the physician is interested and invested in helping. An active posture often includes good eye contact, occasional nodding when appropriate, and leaning forward when the patient is talking. Verbal skills should include using reflection. This refers to commenting on what the patient says by mirroring or paraphrasing his or her words. An example might be:

"You are saying you wish to go forward with the surgery?"

Reflection provides the patient with knowledge that the doctor was listening and wanted to further understand that the patient was heard correctly. Finally, avoiding medical jargon results in more comprehensible discussion with patient and family. Medical terms should be explained in language that the family can understand.

Dealing with Patient and Family Reactions

Part of the pressure of breaking bad news is how best to relay the information to a patient and the family. However, another big stressor for a physician is dealing with how the patient and the family might react to bad news. Emotions can vary and may include disbelief, sadness, fear, and anger. The expression of these emotions can be unpleasant for the physician and hospital or clinic staff. A few approaches can help in navigating this difficult part of the process. It is indeed important to assess the patient's emotional reaction, as this can help in preparing a plan. For example, if the patient is scared, then the physician may need to gently work him or her up to the next part of treatment. Empathy is also important. Carl Rogers, noted psychologist, once described empathy as striving to generate the feeling that you have walked in that patient's shoes.[5] Finally, it is best to avoid disparaging or condescending remarks about colleagues while delivering bad news, since this will only generate unnecessary hard feelings toward other physicians and possible future professional problems with colleagues.

Showing empathy is a good start, but it is not all that a doctor needs to do. It is also important for the physician to let the patient and family know that it is understood how they feel. This can be especially helpful when it comes to anger. If a family is obviously sad or upset, the physician may respond to emotion with phrases such as:

" I can see you are upset, what angers you the most?"

" It sounds like this news has been hard for you to hear, what is on your mind?"

Addressing the emotion should help the family in dealing with it and also lets them know that the physician is not just there to report, their doctor is there to listen and be supportive. To that end, it is reasonable for a physician to show emotion. As humans, we all experience sadness, frustration, anger, and other emotions when things do not go as we planned. While a physician should not turn the meeting into a mutual period of grieving, there is indeed nothing wrong with expressing emotions, even if that includes tears. Further,

when dealing with questions and responses from the family, it is okay to say *"I am sorry"* when appropriate. It is also within reason to say *"I do not know"* if an answer is not known. Such simple statements go a long way in helping the patient and the family understand the physician's humanistic side.

Encouraging and Validating Emotions

The final piece of breaking bad news further deals with how to handle the often intense emotions that can arise once a patient learns of his or her condition and prognosis. Expression of emotions should be encouraged, not discouraged. A patient and family have a right to feel the way they feel, and this is indeed why the news is communicated in a closed room, so that human emotions can be expressed more freely. It is at this stage that the physician can further explore what the news means to the patient and the family. Asking questions such as:

"What does this news mean to you?"

"How do you put this together, or make sense of it?"

This can also be an important time to offer realistic hope for the patient. If the news is that the illness is terminal, we can hope for good times with family and a peaceful end. If the news is that it is a manageable lifelong illness, we can hope for a positive outcome in managing the day to day nature of the malady. At the end of the session, we want to help create a picture of accurate, realistic hope for the patient. The news may alter the hope of the patient, but the idea of "shifting hope" toward another area can be quite helpful. Thus, while hoping to live longer than two years may not be accurate, hoping to get the most out of those two years with one's family could be a very realistic goal.

Toward the end of the meeting, it is also a good idea for the physician to offer other resources. Depending on the situation, counselors, clergy, and hospice could be involved. Contact information or brochures could be provided for the family. Many types of illnesses may have their own support system in place. For example, some hospitals have a Cardiac Care Support Program or a Cancer Support Program. In this way, the physician can indicate that this news does not have to be processed alone and that the family need not negotiate the management of the illness without continued professional help.

Final Thoughts

A few final precautionary notes are in order regarding the end of a breaking bad news session. A meeting should be arranged to follow up with the patient very soon. If it is an inpatient situation, then follow up the next day is appropriate. If it is outpatient, a one week or sooner follow up should suffice. As noted earlier, a patient needs support more than ever at this time and a lengthy wait to follow up could be viewed as counterproductive at best and abandonment at worst. Also, if the news was delivered in an outpatient setting and it was very difficult news, the patient should be discouraged from driving home. The impact of the bad news may well distract the patient from the typically mundane task of driving home. Instead, a family member or alternative transportation (e.g., bus, cab) should be utilized to minimize the likelihood of an ill-timed accident. Although rare, a patient in a vulnerable state may see suicide as an option shortly after the bad news and driving a car would unfortunately give them a fairly lethal means to carry out self harm, and could unwittingly put others on the road at risk.

Without a doubt, physicians deal with many stressful situations. It is often said that we learn about life by dealing with adversity. Finding out bad news and then communicating that bad news can be quite an adverse situation. It is important during those times that physicians remember to care for themselves. First and foremost, it is important to not take the bad news personally. Patient illness and patient response to treatment does not typically reflect on a doctor's abilities. After all, the job of a physician is not to prevent death, it is to manage and hopefully cure illness, if a cure exists. It is important that physicians keep their thoughts positive and try not to personalize loss and illness. Furthermore, it is also important to bear in mind that life is not always fair. When a mother of two is diagnosed with terminal cancer, it is not fair. When an otherwise healthy grandfather of five and father of three contracts pneumonia and dies, it is also not fair. Not to his wife, not to his family, and certainly not to his physician. All of us must deal with unfair incidents in life and manage them as best we can. One must keep this in mind and try not to personalize these incidents. Therefore, the final challenge after breaking bad news is how physicians continue to manage self-care in addition to their professional lives.[6]

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Schwannoma of the Ulnar Nerve: A Case Report and Review of the Literature

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Abstract

We report a case of a large ulnar nerve schwannoma, a rare type of soft tissue neoplasm. Diagnostic pearls are described to facilitate a more accurate and timely diagnosis. These characteristics include mobility, Tinel's sign, MRI target sign, S100 histological staining, Antoni patterns, and others. With a correct diagnosis, the tumor can be extirpated with preservation of nerve function and a low risk of recurrence.

Introduction

Schwannomas are the most common type of tumor arising in peripheral nerves.[1] However, peripheral nerve tumors are rare, representing less than 8% of soft tissue neoplasms. Schwannomas are non-invasive tumors arising from peripheral nerve sheaths and are encapsulated by epineurium.[2] There is a 2:1 occurrence of upper limb to lower limb schwannomas, generally on the volar surface. There is no predisposition for sex or race, but they usually develop in 30-60 year olds.[1] Schwannomas are often misdiagnosed due to their indistinct signs and symptoms, which may lead to detrimental neurologic deficits if approached incorrectly. It has been shown that less than a quarter of diagnostic tests provide an accurate diagnosis of schwannoma.[3]

Case Report

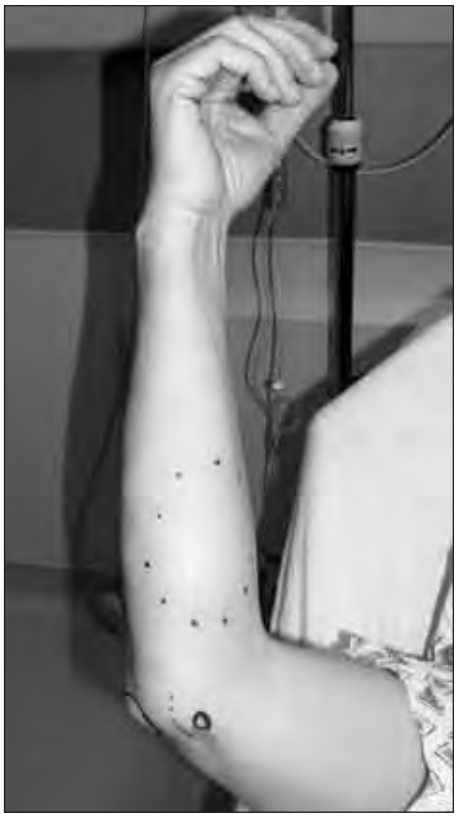
We present a 53 year old right hand dominant female with a slowly enlarging mass within her proximal volar right forearm (Figure 1). The mass had been present for a minimum of two years and had become more painful and noticeable over time. Dull, intermittent pain was reported at rest over the mass, and was moderately sharper during flexion of the fingers or bumping of the forearm. The level of discomfort increasingly hindered her ability to perform activities of daily living.

She was initially treated conservatively at an outside facility for a ruptured forearm muscle belly. Subsequently, her symptoms worsened and a CT guided biopsy of the suspected mass was performed. The patient reported the biopsy was extremely painful and caused an exacerbation of her forearm pain. Histopathology demonstrated a paucicellular specimen with very rare fragments of fibrous tissue that was insufficient for diagnosis.

She was referred to our hand surgery service following the inconclusive biopsy. The 5 cm firm mass was mobile perpendicular to the nerve axis and immobile along the parallel axis. A very sensitive and positive Tinel's sign radiated in the ulnar distribution, with dysthesias directly over the mass and along the dorsal ulnar distribution of her hand. Semmes Weinstein testing indicated diminished light touch and hypersensitivity to sharp touch in the same region. However, her strength of the intrinsic muscles of the right hand was 5/5 without evidence of weakness or loss of range of motion.

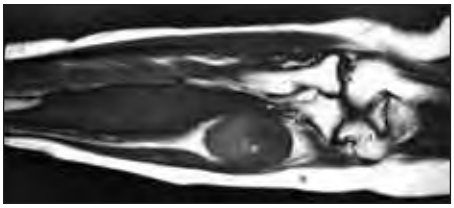
An MRI was performed and showed a 5.0 cm x 3.0 cm x 4.6 cm diameter mass displacing the flexor digitorum superficialis and palmaris longus muscles (Figure 2). The mass had smooth margins but displayed a complex heterogeneous signal. There was no evidence of invasion of adjoining muscles or bones. With gadolinium injection, an intense irregular enhancement was seen. A capsule surrounded the eccentrically placed mass. Images also indicated the presence of a hemorrhagic center related to the needle biopsy. MRI diagnosis was inconclusive, but the differential included, schwannoma, malignant histiocytoma, neurofibrosarcoma, or soft tissue malignancy.

Figure 1.
Preoperative: The dotted line indicates the edge of the palpable tumor. Additionally, the olecranon, medial epicondyle, and path of the ulnar nerve are identified.



She was taken to the operating room for exploration. Extirpation of the tumor was performed via a longitudinal access incision through the epineurium and careful separation of the nerve and tumor (Figure 3). The tumor measured 4.0 cm x 3.0 cm x 1.9 cm (Figure 4). It

Figure 2.
MRI: T1 weighted MRI of the right upper extremity showing the large well demarcated but heterogeneous mass. The MRI lacked the traditional "target sign" that is commonly associated with schwannomas.



showed a hypo-cellular tissue with Schwann cells strongly positive for S100 protein by immunostain technique (Figure 5). Antoni B patterns predominated with few areas suggestive of Antoni A patterns. Incision of the tumor also revealed hemorrhage and thrombosis consistent with prior needle aspiration. Three months following surgery the patient has retained full ulnar motor and sensory function as well as improving sensory paresthesias in her dorsal ulnar division.

Discussion

Diagnosis of a schwannoma in the preoperative period is challenging because of the slow growth and paucity of symptoms. Diagnostic accuracy is crucial to maintaining the integrity of the nerve involved and to properly plan the appropriate surgical intervention. Often these tumors present as palpable masses, tender to displacement without muscles weakness. Tinel's sign is positive in the majority of cases. The tumors are transversely mobile but immobile longitudinally, likely due to their nested intraneural location. Schwannomas share many features with other soft tissue tumors and are frequently misdiagnosed due to similarities. Differential diagnosis should include neurofibroma, ganglion cysts, malignant tumors, lipomas, and xanthomas.[1,4] Neurofibromas, in particular, cannot be distinguished from schwannomas on physical examination. The symptoms appear to be nonspecific, which adds to difficulty in diagnosis.[5] They may be differentiated on MRI or fine needle aspiration. Malignant masses exhibit more distinct signs but are often mistaken for schwannomas in early stages of diagnosis. Unlike schwannomas, malignant tumors often have immobility, firmness, constant pain at rest, and motor weakness.[6] Weakness may occur if the benign tumor exceeds 2.5 cm and can be location dependent. Kehoe et al (1995) analyzed 88 peripheral nerve tumors, where only one was correctly diagnosed as a schwannoma preoperatively.

Figure 3.
Intraoperative: The proximal and distal ulnar nerve are identified with vascular loops. Note how the fascicles of the ulnar nerve are splayed out over the tumor. Identification of these fascicles is crucial to determine a safe longitudinal entry point through the epineurium.

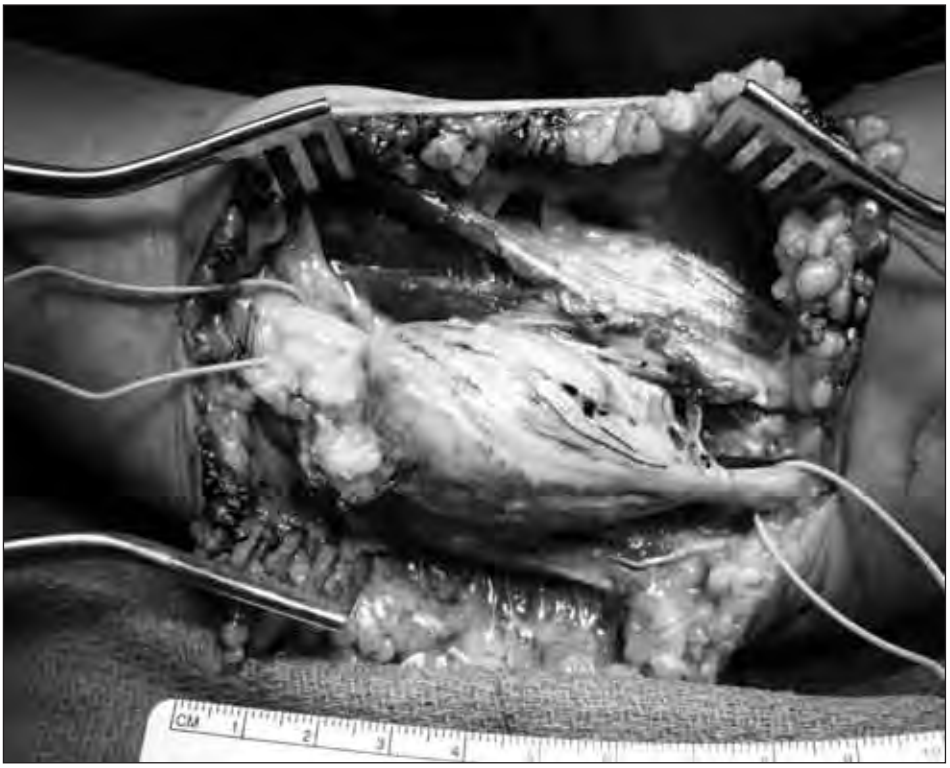


Figure 4.
Tumor: Gross appearance of the Schwannoma following removal from within the ulnar nerve.

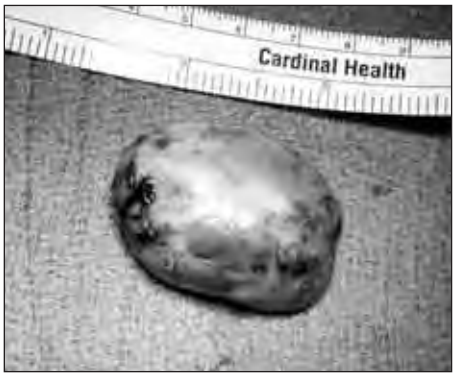
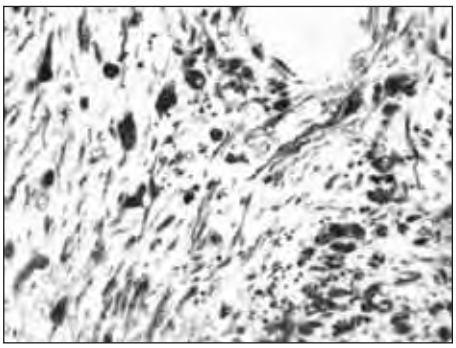


Figure 5.
Histopathology: A hypo-cellular tissue with Schwann cells staining strongly positive for S100 protein.



Gadolinium enhanced T1-weighted and T2-weighted MRIs are particularly useful in diagnosing schwannomas. Koga et al (2007) found the presence of the target sign to be 100% specific and 59% sensitive for the tumors. The target sign is the contrasting central and peripheral intensities demonstrated on the images. Histological analysis credits the central hyperintensities and hypointensities on T1 gadolinium and T2, respectively, to Antoni A cells. Antoni A patterns are of low cellular concentration. Antoni B areas are of high cell concentration and correspond to peripheral intensities on MRI and CT.[8]

Histological staining reveals a strongly positive S100 protein that is specific for schwannomas and helps to rule out neurofibromas.[5,9] Imaging shows the tumors as round or oval, eccentrically located in relation to the nerve, encapsulated, isolated, and non-invasive. In comparison, neurofibromas are non-encapsulated and intimately surround the nerve. They cannot be surgically removed without damaging the connected nerve, often necessitating nerve grafting to repair functioning.[2,4,5] Schwannomas, on the other hand, can be separated surgically from the nerve fascicles avoiding neurologic deficits.[4] This emphasizes the importance of a correct preoperative diagnosis. Despite the structural differences of soft tissue tumors, they are difficult to distinguish with imaging.

Fine needle aspiration tends to be extremely painful in cases of schwannomas, and hemorrhaging may result with temporary worsening of symptoms. The results are frequently inconclusive, but are helpful to exclude ganglion cysts.[3] Domanksi et al (2006) aspirated 116 different schwannomas, and results were not sufficient for diagnosis for about 44% of the cases.

Extirpation of the intraneural schwannoma can be challenging. Sterile tourniquet dissection is recommended and assists in visualization. Loupe magnification and or use of the operating microscope is highly recommended. Identification of the nerve proximal and distal to the tumor is the first important step to reducing injury and traction neuropraxia. Identification of the individual splayed nerve fascicles as they spread over of the tumor is critical in determining the entry through epineurium. A longitudinal incision is created between the splayed fascicles down to the tumor sheath. Once the outer layer of the tumor is identified, a plane can be developed between the more superficial fascicles and the tumor wall. Slow, deliberate, circumferential dissection with a "peanut" and Littler scissors facilitates delivery of the tumor. Once the tumor is removed, the nerve is inspected for injury, the tourniquet is released, and precise hemostasis is achieved. Repair of the epineurium is not required and the longitudinally split muscle is repaired loosely over the nerve. Drains are optional, bulky dressing is preferred, and immediate post operative hand therapy is instituted.

It is uncommon for schwannomas to recur in identical locations.[1] Das et al (2007) found that surgical removal of schwannomas was successful in alleviating preoperative symptoms while maintaining nerve functioning in 89% of their cases.

Conclusion

Schwannomas are rare peripheral nerve tumors that have important diagnostic and radiographic features. These tumors are transversely mobile and longitudinally immobile, have a positive Tinel's sign, and exertional dysathesias or pain. MRI typically reveals the target sign of biphasic contrast of peripheral and central regions and distinct encapsulation displacing the intimately associated nerve fascicles. Surgical resection must be approached with caution to protect nerve function and continuity. Surgical resection is associated with good outcomes. The recurrence rate is low.

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WVSMA Publications Committee Going Strong

The West Virginia State Medical Association (WVSMA) publishes the *West Virginia Medical Journal,* (WVMJ), the only peer-reviewed medical journal in West Virginia. A Publications Committee, composed of Associate Editors, who also must be WVSMA members, review scientific submissions to the *Journal*.

Associate editors volunteer many hours of their time to read, research, and write reviews. Their efforts ensure a quality medical journal that we are proud to publish.

2011-2012 brought numerous changes to the Committee. Two long-time members, Robert Marshall, MD and Martha Mullett, MD have retired. Both gave many years to reviewing and editing scientific case reports, literature reviews, retrospective studies and research works. We will miss their dedication and wish them the very best.

Joel Levien, MD joined the Committee in 2010. He relocated in 2011. We will miss his thorough reviews.

This year, we welcome eight new associate editors to the Publications Committee. Lynne Goebel, MD and Franklin D. Shuler, MD of Huntington, Collin John, MD, MPH, Richard A. Vaughan, MD, FACS, and David B. Watson, MD of Morgantown. Additionally, Richard C. Rashid, MD, Steven Sondike, MD, and Robert Walker, MD of Charleston are new to the Committee.

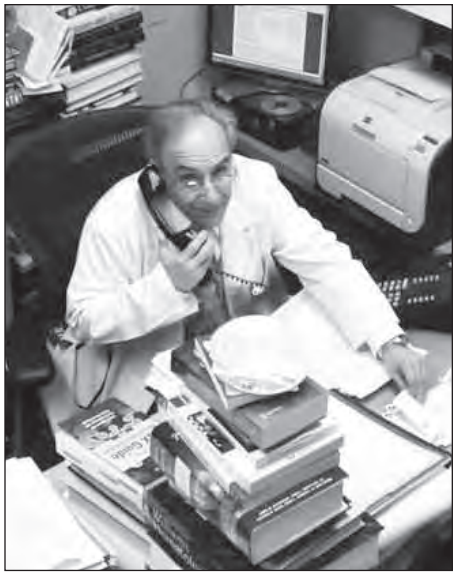

Photo taken by Tom Hindman and used with permission of the *Charleston Daily Mail.*

Steven J. Jubelirer, MD, is an Associate Editor for the WVMJ. He is seen here in his office doing what he does best, "MULTI-tasking".

2012 ANNUAL BUSINESS MEETING & PHYSICIAN PRACTICE CONFERENCE


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2012 Legislative Briefs

Protecting Against a Healthcare Provider Tax

POSITION: The WVSMA applauds the completion of the phase-out of the healthcare provider tax! We strongly encourage the Legislature to reject any proposal to reinstate a healthcare provider tax in the future.

ISSUE: The healthcare provider tax was imposed in 1993 as the Legislature's solution to generate additional funding for Medicaid. It was widely considered an unfair burden and repeal of the law was sought by the physician community since its inception. Full repeal became a reality on July 1, 2010.

In 2001 the Legislature passed a bill initiating the repeal of this tax on all individual practitioners through a ten-year phase out. As a result, on July 1, 2010 the tax on physicians and all other individual healthcare practitioners was eliminated.

The WVSMA thanks the Legislature for their foresight in the passage of this phase-out and for their fortitude in continuing down the path of repeal. We strongly recommend that no similar taxes be considered in the future.

Addressing Substance Abuse: Balancing Treatment nd Prevention

POSITION: The WVSMA supports policies that discourage diversion of prescription drugs and that facilitate treatment opportunities for individuals suffering from substance use disorders. Such policies must be balanced with policies that promote the physician's ability to provide comprehensive and compassionate care, and an individual's ability to access appropriate treatment.

ISSUE: Substance use disorders are a significant problem in the United States and in West Virginia. Recent news reports have highlighted the growing problem with prescription drug diversion, and this is an epidemic affecting not only adults but also our children and teens. Although the WVSMA recognizes the importance of policies that prevent substance abuse and prescription drug diversion through law enforcement mechanisms, we also recognize that physicians have a responsibility to provide appropriate treatment to patients, and policies should not interfere with their ability to practice good medicine. Policies should not focus on requiring physicians to be watchdogs for potential drug abusers because this could deter patients from seeking help or treatment.

With the recognition of the problems associated with prescription drug diversion, misuse and addiction in West Virginia and the understanding that it is the physician's responsibility to help lead the effort to address this epidemic, the WVSMA formed a select committee in the spring of 2011 and developed a comprehensive set of 24 physician led recommendations to address prescription drug diversion. The full document is posted at wvsma.com. Those recommendations have been offered to state policy makers as a platform for addressing this epidemic.

Ensuring Healthcare Provider Transparency

POSITION: The WVSMA supports legislation to ensure transparency regarding the education training and licensure of healthcare providers.

ISSUE: Patients are confused about the differences among various types of healthcare providers. Currently, patients mistake medical doctors with non-physician providers, and they do not know that certain medical specialists are physicians. The WVSMA believes that patients need increased clarity and transparency in healthcare.

Confusion among patients about who is and who is not qualified to provide specific patient care undermines the reliability of the healthcare system and can put patients at risk. To help ensure patients can answer the simple question "Who is taking care of me?" the WVSMA believes that all healthcare professionals – physicians and non-physicians – should be required to accurately and clearly disclose their training and qualifications to patients.

Regulating Expert Witness Testimony

POSITION: The WVSMA supports legislation to ensure testimony provided by expert witnesses in medical liability cases is fair, accurate and reflects the applicable standard of care. To help ensure this, all expert witnesses should either be licensed in state or hold a certificate granted by the West Virginia Board of Medicine or Osteopathy.

ISSUE: Expert witnesses are often called upon in medical negligence cases to provide testimony as to a defendant-physician's breach of the standard of care, and the WVSMA believes that all expert witness testimony should be fair and accurate. Out-of-state doctors serving as expert witnesses are allowed to provide such testimony, and thus, should be required to accurately reflect the applicable standard of care.

West Virginia law does not require that an expert hold a West Virginia license; thus, physicians who are licensed in other states routinely provide expert testimony in medical malpractice cases. Unfortunately, in many instances the testimony given does not accurately reflect the prevailing professional standard of care. One way to ensure quality testimony, while also implementing accountability for such testimony, which is not reflective of the prevailing standard of care, is to require out-of-state experts to obtain a certificate prior to testifying.

Regulating the Rental Network PPO Market

POSITION: The WVSMA supports legislative initiatives to increase the transparency and fairness of rental network PPO activity.

ISSUE: In most states, physicians have little control over how their managed care contracts are marketed, leaving them vulnerable to unauthorized discounts in payments for their services. The lack of regulatory oversight in the Preferred Provider Organization (PPO) industry has resulted in the proliferation of entities that are engaged in the lucrative business of developing health care provider panels and then leasing the panels and associated discounts to various entities including but not limited to third party administrators acting on behalf of a self-insured employer or managed care organization that does not have a physician network in a particular market. These entities are often called "rental network PPOs".

The WVSMA supports legislation to advance the NCOIL Rental Network Contract Arrangements Model Act, which aims to implement transparent practices. Regulation of the secondary rental network, including restricting the number of times a rental network discount can be sold, is necessary to ensure that this unfair proliferation of physician contract violations ends.

Addressing Healthcare Practitioner Scope of Practice Expansions

POSITION: The WVSMA opposes the scope of practice expansion of non-physician practitioners without the appropriate education, training and supervision.

ISSUE: Every year, in nearly every state, non-physician practitioners lobby for expansion of scope of practice to gain prescriptive and independent practice rights that were once the sole domain of physicians. The WVSMA recognizes the inevitability of scope of practice overlap. While some scope expansions are appropriate and beneficial to patients, many are unwarranted intrusions into the physician practice of medicine. The health and safety of patients are threatened when non-physician practitioners are permitted to perform services that are not commensurate with their education, training and experience.

Determining whether a specific healthcare profession is capable of providing the proposed care in a safe and effective manner is of paramount interest and should be done in a deliberate manner not under political pressure. The WVSMA does support collaborative arrangements with nurse practitioners, physician assistants, pharmacists and radiologist assistants. Through such collaboration, patient access and quality care can be achieved without threatening patient safety.

Protecting Medical Liability Reform Laws

POSITION: The WVSMA strongly maintains the need to preserve the integrity of the Medical Professional Liability Act and to protect against any threats to erode the current statute.

ISSUE: Ten years ago West Virginia's healthcare system was spiraling into a severe crisis. The lack of affordable and available medical liability insurance forced many physicians to either restrict the services they offer, move their medical practice out of state or quit practicing altogether. Faced with the reality that West Virginia's healthcare system was on the verge of collapse, the Legislature responded by passing two rounds of medical liability reform legislation.

First in 2001, the Legislature passed HB 601, which included numerous measures to help put the medical liability insurance market back on track. In 2003 the Legislature once again addressed the crisis with the passage of HB 2122, and was the first comprehensive medical liability reform that had passed in West Virginia in over 20 years and placed West Virginia at the forefront of most states in regard to such reform laws. The new law included a $250,000 non-economic damages cap, a $500,000 trauma cap, collateral source offset, elimination of joint liability, creation of a patient injury compensation fund, and more stringent medical

expert witness requirements. Additionally, and critically important, the legislation provided the revenue and mechanism for the creation of a physicians' mutual insurance company, a West Virginia based insurer which is owned and operated by its policyholders.

With this said, long term stabilization of the medical liability insurance market has been hinged upon whether the West Virginia Supreme Court of Appeals would uphold the caps on damages as constitutional. In June of 2011 the Court ruled, in a 4 to 1 decision, to do just that in the MacDonald v. City Hospital case. This ruling will go far, securing further stabilization of the market.

Authorizing Assignment of Benefits

POSITION: The WVSMA supports legislative initiatives to require all health insurers and third party payers to honor an individual's request to send payments directly to their provider, even if the provider is not in the insured's network.

ISSUE: Assignment of benefits is a complex issue involving the relationship of a patient with his or her healthcare provider and insurance company. When services are provided in-network, the provider already has the right to submit claims directly to the health plan pursuant to terms of the provider contract. The problem is that some insurers will not accept an assignment of benefits from non-contracted or out-of-network providers. This places an unnecessary burden on the patient, and also creates an administrative hassle for providers. It is simpler for all involved to take the patient out of the middle and have the insurance company and the provider resolve the payment of the bill.

Many states have laws that help avoid this problem and clarify how this must work in circumstances involving out-of-network providers. Those laws require the insurance companies to honor the patient's assignment of benefits and pay the out-of-network provider directly. The WVSMA joins with the WV Hospital Association in recommending that similar legislation be passed in West Virginia.

Supporting State Healthcare Reform Initiatives

POSITION: The WVSMA supports efforts to achieve healthcare reform in West Virginia.

ISSUE: West Virginia, like the rest of the nation, is faced with the serious threat of rising costs in health insurance, decreasing availability of insurance and concerns with chronically ill patients and a progressively unhealthy population. As the federal government is currently engaged in the implementation of health system reform and the states are looked upon to execute the details, the

WVSMA believes the following principles should be integral to all initiatives that are considered:

Physician-Patient Relationship – Reform initiatives must preserve the inviolability of the physician-patient relationship.

Leadership – Physicians must be at the center and provide the leadership in planning and implementation of innovations in the healthcare delivery system.

Scope of Practice – Care delivery models that involve expansion of the scope of practice for non-physician must not expand any scope of practice beyond each practitioner's respective professional category.

Funding – Reform initiatives and pilots must be accompanied by adequate funding so that physicians are not required to absorb the additional overhead.

Evidence – New healthcare delivery models and other reforms to the system must be continually evaluated for their impact on patient outcomes based upon scholarly analysis and evolving medical evidence.

Additionally, the following core components of reform must be considered:

Patient-Centered Medical Home

In order to appropriately address the chronic healthcare needs of our patients a move toward the patient-centered medical home is necessary. The fundamental principle that a medical home is "physician" led cannot be underscored enough.

Wellness and Prevention

As West Virginia leads the nation in unhealthy behaviors (tobacco use, drug use) and lifestyles (obesity) it is critical that a core component of any healthcare reform address these issues.

Health Information Technology

Encouraging the use and supporting the expansion of electronic medical records and other health information technologies is critical to reforming West Virginia's healthcare system.

Medicaid Expansion

WVSMA strongly supports fully funding the West Virginia Medicaid program to provide appropriate reimbursement to healthcare providers for their services. Many physicians must refuse to accept

Medicaid patients or limit the number they treat because of the program's inadequate reimbursements. To help ensure continued access to medical care and to reduce cost-shifting to the private sector, the WVSMA supports responsible initiatives that help secure funding to sustain the Medicaid budget.

Research and Education

Critical to success is a process that helps to answer the question of whether the reforms are what the public needs or better yet are tailored in a fashion that will lead to successful outcomes.

Improving West Virginia's Perinatal Health

POSITION: The WVSMA supports initiatives to improve the health of pregnant women and children in West Virginia.

ISSUE: The health of West Virginia's babies has a tremendous impact on the state's economy, workforce development and family well-being. Because of the declining status of the health of WV mothers and babies the Perinatal Partnership was formed to address these needs and the WVSMA has been an active member in their work. The Partnership and its partner physicians, hospitals, nurses, and certified nurse midwives have begun quality initiatives to improve the State's poor rates for pre-term birth, primary C-sections, vaginal births after cesarean section (VBAC), and low birth weight infants.

The WVSMA, along with the WV Perinatal Partnership, supports and recommends the following policies to further the efforts on improving perinatal wellness. By working together, we can make sure that the 21,000 babies born each year in West Virginia and their mothers have the best healthcare possible to assure a healthy beginning:

Insurance coverage for dependents for contraception and for pregnancy

The WVSMA along with the WV Perinatal Partnership supports legislation to require all health insurers cover the cost of maternity care and contraceptive care for covered dependants.

Prevention and treatment interventions for pregnant women who have substance abuse problems should be priority.

Pregnant women who are found to use drugs and/or alcohol should be directed to early and regular prenatal care that incorporates as part of the practice, substance use detection, diagnosis and referral for treatment with the goal of delivering a drug free infant. To ensure that women have trusted and confidential care available to them, it is essential that the care is obtained without fear of retribution of any kind

Expand state education to adequately prepare our young West Virginians for parenthood

West Virginia women under twenty years of age have worse outcomes for their babies than any other age group of pregnant women, except for women over 40 years. Advance parenthood preparation of our young students could help the State significantly reduce low birth weight and preterm birth among women under twenty years of age, reduce school drop out rates, decrease the State's high rate of infant mortality, among other issues.

Strengthening Tobacco Control and Clean Indoor Air Initiatives

POSITION: The WVSMA supports policies that protect public health by discouraging tobacco use and promoting clean indoor air. Such policies include significantly increasing the tobacco excise tax, allocating sufficient funding for education programs designed to reduce or eliminate tobacco use and exposure to secondhand smoke, and supporting counties' indoor air regulations.

ISSUE: The WVSMA seeks to reduce or eliminate tobacco use and exposure to secondhand smoke by West Virginia citizens, especially children and pregnant women. Among the states, West Virginia ranks worst in the nation for smoking rates of adults and youth. We rank first in smoking during pregnancy and second overall in women smokers. Further, West Virginia has the highest rate of smokeless tobacco use in the nation with one in three high school students currently use tobacco and one in five males use smokeless tobacco.

The deleterious effects of tobacco use affect not only smokers but also the public at large. Scientific studies clearly show that secondhand cigarette smoke is a hazardous, cancer-causing air pollutant. Exposure to secondhand smoke causes increased risk for disease and death in healthy nonsmokers and is the third leading cause of preventable death among nonsmokers. The prevalence of tobacco use in West Virginia translates to an enormous economic toll as the state annually spends $1 billion on direct healthcare costs of smoking, and another $1 billion on occupational costs due to smoking.

The WVSMA joins the coalition of a Tobacco Free WV in recommending a three tiered approach toward addressing tobacco use:

- Increase the Tobacco Excise Tax
- Provide Adequate State Funding for Cessation Education Programs
- Protect County Clean Indoor Air Policies

Combating Poor Oral Health

POSITION: The WVSMA supports efforts to make policy changes which foster improved oral health for West Virginia's children and families.

ISSUE: Regrettably, West Virginia leads the nation in the percentage of our citizens with tooth loss and decay. By the time of high school graduation, over 80 percent of West Virginia youth have had dental decay; over 60 percent have had dental decay by age 8 and over 30 percent of West Virginia children suffer from untreated decay. Strikingly, over 45 percent of West Virginia adults, aged 65 and older, have lost all their natural teeth.

Dental disease is the single most prevalent chronic childhood disease and correlates directly to other health concerns. With today's tools and technologies, oral disease is almost 100% preventable and is cost effective with the potential to save millions of dollars. Poor oral health can contribute to a lifetime of overall poor health including diabetes and heart disease.

The WVSMA supports the following recommendations to address poor oral health:

- Encourage school aged children to have dental exams at appropriate intervals.
- Prohibit sale of sugary snacks and beverages in schools.
- Address the use of smokeless tobacco among our youth through increasing the tobacco tax and increasing counter marketing and cessation programs.

Strengthening and Preserving our Safety laws

POSITION: The WVSMA strongly supports strengthening West Virginia's All-Terrain Vehicle safety law and maintaining the motorcycle helmet law for operators and riders of all ages.

ISSUE: Though the Legislature passed All-Terrain Vehicle (ATV) Child Safety law in 2004, much more needs to be done to protect the health and safety of our citizens. While the West Virginia State Legislature has made great strides toward ATV safety, much more is still needed to improve such safety laws.

- Removing non road-worthy vehicles from our public roadways.
- Expanding the mandatory helmet law to cover all persons of age.
- Strengthening the requirement for ATV safety instruction to require hands-on safety courses
- Prohibiting passengers with the exception of machines that manufacturers have designed for passengers.

Another important safety issue is that of preserving the motorcycle helmet law. In recent years, efforts have been made by various groups to repeal our critically important motorcycle helmet law. Such an action by the Legislature would be highly irresponsible. Helmets are the best evaluated way to reduce motorcycle accident deaths and injuries. The WVSMA strongly supports the retention of our State's current mandated helmet use law for all motorcycle operators and riders of all ages.

Pictured from left to right: Evan H. Jenkins, Senator, Cabell County and Executive Director, WVSMA, MaryAnn N. Cater, DO and 2011-2012 WVSMA President, Ron Stollings, MD, Senator, Boone County, and Daniel Foster, MD, Senator, Kanawha County.

2012
Certified Medical Office Manager Class (CMOM)

Thursday, April 26 & Friday, April 27 *and* Thursday, May 3 & Friday, May 4, 2012

Time: 9:00 a.m. to 4:00 p.m. | **Place:** St. Marys Medical Center, Huntington, WV ***(Participants must attend all 4 days.)***

Participant Information

Registrant:_____ E-mail:_____

Practice Name: _____

Street Address: _____

City:_____State:_____ Zip:_____

Phone:_____ Fax: _____

Program Fee/Discount Policies:

Registration Fee: $999 WVSMA members & PMI Certified Professionals: $899 *(Includes instructional materials and exam fee.)*

Payment Method:

❑ American Express ❑ MasterCard ❑ Visa ❑ Discover ❑ Check Enclosed

Payable to:
West Virginia State Medical Association

Card No: _____ Expiration Date:_____V Code:_____
(Three digit number on the back of your credit card.)

Name As It Appears On Card:_____ Email address: _____
CONFIRMATION WILL BE SENT BY EMAIL.

Signature: _____

Registration Methods:

Mail registration form to: Karie Sharp • West Virginia State Medical Association • PO Box 4106, Charleston, WV 25364

Fax registration form to: Karie Sharp • (304) 925-0345 **Charge by phone:** Karie Sharp • (304) 925-0342, ext. 12

E-mail: karie@wvsma.com

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PRACTICE MANAGEMENT INSTITUTE

WEST VIRGINIA State Medical Association

Valued Assistance in 2011: Accepting New Clients in 2012

Now serving physician clients in 40 West Virginia Counties

WEST VIRGINIA MEDICAL INSURANCE AGENCY
"Meeting the insurance needs of physicians"

The West Virginia Medical Insurance Agency provided "valued assistance" in 2011 for each of its physician clients; note the following examples.

CARE/RM Credits: In 2011, WVMIA clients renewing with the West Virginia Mutual Insurance Company averaged 9.4% (out of a possible 10%) in CARE/RM premium credits, with 93.7% receiving 8% or more in premium credits.

While the Mutual notifies their insureds of scheduled programs, the Agency maintains records and follow ups with its clients about needed credits and the time/date/location of seminars in their area.

In addition, the Agency had a representative present at 20 Mutual CARE/CME Loss Control programs conducted by the Mutual throughout the state.

BOP and WC Savings:

First-year clients of the Agency achieved premium savings of 18.5% on businessowners policies and 12.7% on workers' compensation policies.

Premium Financing: In 2011, the Agency assisted 54 accounts obtain premium financing totaling $1,350,443 at interest rates between 2.19% and 4.9%, plus no service fee was added by the Agency.

Exhibiting: In 2011, the Agency exhibited at four different specialty society meetings, (Pediatrics, Orthopaedics, Family Practice and Otolaryngology), and four different physician or physician practice organization meetings (MGMA, OMA, Philippine Medical Association, IPA of the Upper Ohio Valley).

Medical Component Society Meetings: In 2011, Agency representatives attended six different medical component society meetings (some more than once) making presentations about the valued assistance provided by the Agency.

For more information on how you can become a client of the West Virginia Medical Insurance Agency, a wholly-owned subsidiary of the WVSMA, please call Steve Brown, Agency Manager, at 1-800-257-4747 ext. 22 or 304-925-0342 ext 22, or email: steve@wvsma.com.

2012 WESPAC Contributors

The WVSMA would like to thank the following physicians, residents, medical students and Alliance members for their contributions to WESPAC. These contributions were received as of February 15, 2012:

Chairman's Club ($1000)

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Ophas Vongxaiburana, MD
Sherri A. Young, DO

Resident/Student ($20)

Richard W. Eller, MD

WESPAC is the West Virginia State Medical Association's bipartisan political action committee. We work throughout the year with elected officials to make sure they understand the many facets of our healthcare system.

WESPAC's goal is to organize the physician community into a powerful voice for quality healthcare in the West Virginia Legislature. We seek to preserve the vital relationship between you and your patients by educating our legislators about issues important to our physicians.

WESPAC contributions provide critical support for our endorsed candidates. Your contribution can make the difference between a pro-physician/patient candidate winning or losing.

To make a contribution to WESPAC, please call
(304) 925-0342, ext. 12

Cabell County Medical Society

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Lisa Casalenuovo, DO
David Stastny, DO

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Peter Wentzel, MD

Please direct all membership inquiries to:

Mona Thevenin, WVSMA Membership Director at 304.925.0342, ext. 16 or mona@wvsma.com.

WVU Hospitals to add 10-story tower

Four-year, $280-million expansion project to create 750 jobs

Governor Earl Ray Tomblin, Bruce McClymonds and President James P. Clements, stand before the architect's rendering of the new tower.

WVU Hospitals has announced plans to construct a 10-story tower to address capacity issues and better serve the healthcare needs of all West Virginians. The expansion marks its largest construction project since the construction of Ruby Memorial Hospital in the late-1980s. As a result of the expansion, WVU Hospitals expects to add 750 permanent jobs and 139 new beds.

"Our goal is to provide access to all of the great resources we have here at WVU Hospitals' Ruby Memorial and WVU Children's Hospital for anyone who needs them," Bruce McClymonds, president and CEO of WVU Hospitals, said. "In doing so, we will remain true to our mission of caring for people from every corner of the state and beyond."

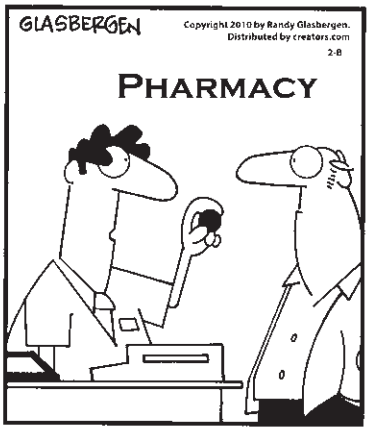
The $280-million tower will take four years to complete. It will expand WVU Children's Hospital's Neonatal Intensive Care Unit, the Emergency Department and the Jon Michael Moore Trauma Center. The tower will also expand the hospital's other intensive care units.

The expansion will also result in expanded food service and conference spaces and additional elevators, parking and campus roadways. Currently, all but 30 hospital rooms are private. When the project is complete, all patient rooms will be private.

"As the population of the state continues to age, the demand for our services is going to continue to grow," McClymonds said. "And, with more than 500 transferred to us each month from hospitals throughout the state, we can ensure West Virginians won't have to leave the state to receive the highest quality healthcare."

West Virginia Gov. Earl Ray Tomblin, who attended a press conference in January announcing the project along with WVU President James P. Clements, Ph.D., called the expansion "a giant step forward in patient care." He added that the jobs it will create are another sign that the state's economy is strong. "These 750 good jobs, with benefits, show that West Virginia is moving forward."

The expansion will be subject to Certificate of Need approval by the West Virginia Health Care Authority. Construction costs are estimated to be $248 million with the remaining $32 million for financing and other related costs. The project will be financed by WVU Hospitals, Inc., a member of the West Virginia United Health System. No state funds will be sought and no extraordinary rate increase is anticipated as a result of the construction.



"This is the most effective diet pill we sell. You chase it around a handball court for an hour a day."

WVU student presents cancer research at the Capitol

Julie Diamond, a senior biology major at West Virginia University, presented her cancer research during Undergraduate Research Day at the Capitol on Jan. 26 in Charleston. The annual event provides students in various disciplines at private and public institutions throughout the state an opportunity to share their research with members of the West Virginia Legislature and executive branch who provide funding for higher education.

Working under Laura Gibson, Ph.D., at the Mary Babb Randolph Cancer Center as part of her Honors College Program, Diamond's research focuses on a signaling molecule found in leukemic cells and believed to contribute to tumor growth. She also studies the effects of chemotherapy on the molecule.

"So far, we've discovered that this molecule seems to be controlled by a specific mechanism that contributes to its production," Diamond said. "Research like this can potentially help millions of people suffering from leukemia. I'm excited about explaining the work we do in our lab to lawmakers and helping them understand the importance of funding biomedical science."

After she graduates from WVU in May, Diamond plans to pursue graduate school and earn a Ph.D. in biomedical science. Ultimately, she wants to have her own lab and do research on finding cures for cancer and other diseases.

Diamond is also a recipient of the WVU PROMISE Scholarship, Presidential Scholarship and the Presidential Award for Excellence and Scholarship.

Julie Diamond

OMM clinic teaches students, provides service to community

The student Osteopathic Manipulative Medicine (OMM) clinic offered by the West Virginia School of Osteopathic Medicine (WVSOM) is a way for second-year students to gain hands-on experience with patients as well as provide treatment techniques to community members.

The clinic, which began January 17 and lasts until April, is often the students' first chance to use osteopathic principles on patients.

"The Student OMM Clinic provides the students the opportunity to evaluate patients osteopathically and treat them with the techniques they have been taught in Osteopathic Principles & Practice classes and labs," said Dr. Deborah Schmidt, the faculty member responsible for organizing the clinic.

She said second-year students are able to practice what they have learned in Clinical Skills courses including gathering patient history, performing musculoskeletal physical exams, organizing a treatment plan and treating human patients.

The students will be closely supervised by about 12 physicians — represented by six full-time faculty physicians from the OMM department and six local osteopathic physicians.

"The students will not have another opportunity to be so closely supervised and taught while performing OMM," Schmidt said.

This year organizers hope students can see more patients than they have in prior years.

"Because we're seeing patients in two separate five-week blocks, we plan to see double the patients we've seen in the past," said Jeanea Phillips, former OPP course secretary. "We're looking to have about 180 to 200 patients seen throughout the whole 10 weeks."

Schmidt said that the OPP faculty at WVSOM feels that the student clinic is an invaluable experience for the osteopathic students.

"WVSOM is recognized among osteopathic schools for this Student OMM Clinic. In some other osteopathic schools students never have the experience of directly treating a real patient with osteopathic techniques while under the close supervision of an experienced osteopathic physician," she said.

But second-year students are not the only ones who benefit from the clinic. First-year students are required to participate in an observational role.

"In the last four weeks, the first-year students are expected to observe in the clinic as the second-year students conduct their patient encounters," Phillips said. "The first-year students will have no hands-on contact with the patients, but it gives them a good idea of what to expect the following year."

Community members interested in participating in the free clinic will need a written referral from their physician, physician's assistant or nurse practitioner. Schmidt said students need the opportunity to see patients with a variety in age, conditions and temperaments. Patients that cannot participate in the clinic include those with active workers' compensation claims or litigation cases, or those who require documentation for legal cases.

The clinic will be open every Tuesday afternoon through April 3.

Maternal Addiction and Recovery Clinic receives $50K grant

Joining Dr. David Jude for the check presentation are Dr. David Chaffin, John Muraca with Coventry Health Care and Dr. Ryan Stone.

The Department of Obstetrics & Gynecology at Marshall University's School of Medicine recently received a $50,000 grant from Carelink Health Plans, Inc. (dba Coventry Health Plans in West Virginia) to assist in start-up costs for a new Maternal Addiction and Recovery Clinic. The money will be used for the start-up costs of the clinic including additional nursing support and support staff and a full-time addiction counselor.

The clinic, located in the Marshall University Medical Center on the campus of Cabell Huntington Hospital, will provide a new treatment option for expectant mothers with abuse issues including counseling sessions throughout their pregnancy.

Coventry Health Care officials say they decided to assist with the clinic costs after learning of the escalating issue.

"Substance abuse in pregnant women is a leading preventable cause of mental, physical and psychological problems in infants and children and it is a tragedy for the entire family," said John Muraca, President of Coventry Health Care and Carelink Health Plans, Inc. "We are proud to present this grant to help the physicians at Marshall with this work."

"Maternal opiate addiction is the most common high-risk problem that we encounter in our obstetrical patients," said David Jude, M.D., professor and chair of the Department of Obstetrics and Gynecology. "We see more pregnant patients with opiate addiction than those with hypertension or diabetes. In this setting, pregnant women with opiate addiction will receive comprehensive care for both their pregnancy and their opiate addiction including counseling, and if indicated, pharmacologic therapy. We are extremely grateful to Coventry Health Care for the grant."

Jude added that resident and student physicians at the School of Medicine will receive education in the evaluation and management of women with dependencies.

Perinatologists David Chaffin, M.D. and Ryan Stone, M.D., are serving as the primary providers of prenatal care for expectant mothers who will use the clinic.

Student receives grant to study diabetic retinopathy

Clay Crabtree

A Marshall University biology student has been awarded a grant to conduct research on diabetic retinopathy, a common eye disease during which excessive growth of blood vessels causes damage to the retina.

Clay M. Crabtree, a senior from Kenova, will receive the $1,800 Grants-in-Aid of Research award from the national science society Sigma Xi. The award will help fund his project to test potential treatments for the disease, which is the leading cause of blindness among working-age Americans.

According to Crabtree, cigarette smoking is a risk factor for diabetic retinopathy because nicotine promotes the growth of blood vessels.

"Agents that can block the actions of nicotine should be useful for the treatment of diabetic retinopathy," he continued. "My research involves testing three of these compounds for their ability to block the growth of new vessels in the retina."

Crabtree's mentor, Dr. Piyali Dasgupta of Marshall's Department of Pharmacology, Physiology and Toxicology, said the grant will give Crabtree the opportunity to further his education through hands-on experience conducting research that could have a real impact on the health of people across the region.

"The findings from Clay's project will be highly relevant to West Virginia because our state has a large number of diabetic patients who are active smokers," she added. "It is a very commendable achievement to receive one of these grants and I look forward to seeing his project progress."

Students use the funding to pay for travel expenses to and from a research site, or for purchase of laboratory equipment necessary to complete their research project.

According to Sigma Xi, the Grants-in-Aid of Research program is highly competitive.

Influenza Vaccination Among West Virginia Pregnant and Postpartum Women 2009-2010

Studies have shown that pregnancy increases the risk of seasonal influenza complications in the mother. Moreover, infants born to vaccinated women have reduced rates of laboratory-confirmed influenza during the first 6 months of life.[1] Vaccination of pregnant women is key to protecting babies from complications of influenza. It should be noted that the nasal-spray influenza vaccine is not an option for women who are pregnant.

West Virginia conducts research pertaining to maternal and child health through the Pregnancy Risk Assessment Monitoring System (PRAMS). PRAMS is a joint research project between the West Virginia Department of Health and Human Resources Office of Maternal, Child and Family Health and the Centers for Disease Control and Prevention (CDC). The project, implemented in 1988, is as an on-going, population-based surveillance system designed to identify maternal attitudes and experiences before, during and after pregnancy. All West Virginia women who have recently had a live birth have a one in fourteen chance of being chosen to participate 2-4 months after their baby's birth. Each month, approximately 200 women are randomly selected from the West Virginia Birth Certificate Registry and asked to participate in the PRAMS survey.

In 2009, WV PRAMS began collecting information on influenza vaccination among pregnant and postpartum women. The data presented covers births from August 2009 thru August 2010; a total of 19,250 eligible births with 2,506 women sampled and a response from 1,659 women. Data are weighted to reflect the entire population of women delivering a live infant in WV during this time period.

Surveyed women were asked if they received an influenza vaccination during this time period. Results show that 47 percent of women did not receive a vaccination, while 12 percent received an H1N1 vaccination, 17 percent received a seasonal influenza vaccination and 24 percent of women received both the H1N1 and seasonal influenza vaccination.

WV PRAMS data demonstrate that healthcare providers play a critical role in the acceptance of influenza vaccine. Pregnant and postpartum women who were either recommended or offered influenza vaccine by their healthcare providers were 5 times more likely to be vaccinated than women who were not recommended or offered the vaccine.

West Virginia's PRAMS asked surveyed women who did not receive the influenza vaccination reasons for not doing so. Most women reported that they normally do not get a flu shot. Over a third of women reported concerns about side effects for their infants or themselves. Women had the option to select more than one reason.

Recommended Actions for Prenatal Care Providers*

There are many things that can be done to protect pregnant and postpartum women and infants from this vaccine-preventable disease.

- Educate staff and pregnant women about the importance of influenza vaccination during pregnancy and its safety; provide a strong recommendation for vaccination
- Issue standing orders for influenza vaccination of pregnant and postpartum women
- Establish an influenza vaccination reminder system
- Post influenza prevention announcements and provide brochures to prompt vaccination requests
- Offer vaccination to pregnant women at the earliest opportunity and throughout flu season (October–April)
- Vaccinate all healthcare personnel in practices to prevent healthcare personnel from influenza and from spreading influenza to patients
- Vaccinate postpartum women who were not vaccinated during pregnancy, preferably before hospital discharge or at 6 week postpartum visit
- Know where to refer patients if influenza vaccine is not available at the practice
- Educate staff and postpartum women that breastfeeding is not a contraindication to vaccination
- Advise family members and other close contacts of pregnant and postpartum women and infants that they should also be vaccinated against influenza

For more information about vaccination, including other vaccines for pregnant and/or postpartum women, visit:

www.wvdhhr.org/mcfh
or www.dhhr.wv.gov/oeps/immunization/Pages/flu.aspx

**WV PRAMS October 2011 Issue Brief*

[1]CDC. 'Prevention and control of influenza with vaccines; recommendations of the Advisory Committee on Immunization Practices (ACIP), 2010.' *MMWR* 2010; 59 (No. RR-8): 1-61.

Melissa Baker, M.A.
MCH Epidemiologist, Office of Maternal, Child and Family Health, Bureau for Public Health

Julie Freshwater, PhD
Flu Surveillance Coordinator, Office of Epidemiology and Prevention Services, Bureau for Public Health

Dee Bixler, M.D., M.P.H.
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2011 Fall AMA Meeting - Resolutions Committee Report

The Riverside Hilton Hotel, New Orleans, Louisiana, November 12-15, 2011

The organization of State Medical Association Presidents and their Executives met the day before the opening of the AMA House of Delegates (HOD).

Foremost topics of this year's agenda were:

- Patients' Bill of Rights, that includes private contracts, patient empowerment, and patient choice of physician.
- Final fix of the broken Medicare Payment (SGR)
- ACO's
- Tort Reform

Eight-hundred students from all over the country attended. The student meeting was held Nov. 1-12. A range of speakers and topics included disaster preparedness, leadership development, and health system reform. Some of the WV students delegation remained to take advantage of the HOD session.

One of our Marshall University student delegates was elected to represent the Southeast Regions.

Dr. Austin Wallace, President and CEO of the West Virginia Medical Mutual Insurance hosted a dinner reception.

The Organized Medical Staff Section (OMSS), with Dr. Hoyt Burdick, of our delegation reported the salient activities of this section.

We led the opposition in the HOD to oppose revision of the Medicare Hospital Condition of Participation that would limit the autonomy of organized medical staff.

Additional topics and speakers included:

- Healthcare Reform Initiative
- relationship with accountable care organizations, and
- the future of medical staff organization.

The House of Delegates highlighted in their deliberations the following key topics:

Prescription Drug Abuse- Drug overdose is the most common accidental death in the USA, with the majority of deaths from prescription drugs.

National Drug Shortage-the HOD voted to support current legislation in Congress that would require manufacturers to notify the FDA of any discontinuance, interruption or adjustment in the manufacture of a drug that may result in a shortage. Delegates called the drug shortage "a national public health emergency.

Private Contracting Bill-The AMA reaffirmed support for the Medicare Patient Empowerment Act that would entail restructuring of private contracts with medicare patients.

Code Conversion- ICD Code 9 to ICD code 10 was voted against by the HOD. It was determined that a small group practice of just three physicians would cost at least $23,290. For a larger group of ten physicians, the cost could reach as much as $285,195.00.

The HOD also sought repeal of the Medicare Independent Payment Board and the provision of expanding non-physicians' scope of practice.

Dr. Peter Carmel in his presidential address highlighted the need for Congress to fix the broken Medicare Payment Formula (SGR) now and forever.

A highlight of this year's meeting was in a speech given by Dr. Madara, the new VP and CEO of the AMA in which he emphasized the core value of our profession—the sacred relationship between physician and patient.

Constantino Y. Amores, MD, FACS
Chairman, WVSMA delegation to the AMA

Obituaries

The WVSMA remembers our esteemed colleagues...

Mildred Mitchell-Bateman, MD, PhD

Mental health pioneer and local icon Dr. Mildred Mitchell-Bateman passed away January 25, 2012, from a short-term illness. She was 89.

Mitchell-Bateman held many positions during her career, including vice president of the American Psychiatric Association and director of the psychiatry department at the Marshall University School of Medicine.

In addition to her parents, Pastor Quilliford Mitchell and Ella Mitchell, she was preceded in death by her brother, Dr. Samuel Q. Mitchell; sister, Dorothy Dixon and husband, William Bateman.

Dr. Mildred Mitchell-Bateman is survived by two daughters, Donna Taylor and Danielle Shanklin; seven grandchildren and ten great-grandchildren and several nieces and nephews.

Thomas W. Crosby, MD

Dr. Thomas William Crosby of Morgantown passed away Saturday, November 26 at the age of 70. He was born in St. Louis, Missouri, January 1941, the child of William Curtis and Francis Doorley Crosby.

He attended Saint Louis University on a swimming scholarship and later the University of Pennsylvania, before graduating from West Virginia University in 1965. While at WVU, he met Kerr Withrow and the two married in 1964. He graduated fro WVU School of Medicine in 1970, the first doctor to complete a residency in Neurology. Following this residency, he became an Alexander von Humboldt Foundation fellow studying Neuropathology at the University of Göttingen, Germany. In 1975, he returned to WVU School of Medicine in the Department of Neurology, attaining the position of Associate Professor before joining Morgantown Internal Medicine Group in 1981. He retired in 2009 because of his health.

Tom is survived by Kerr, his wife of 47 years, their children Katherine and Eric Chaffin of Rye, NY and Ethan and Kathryn Crosby of Crofton, MD; two grandchildren, his brother Roger Crosby of NY, his brother-in-law Edward Lindner and nieces.

He was preceded in death by his father and mother, William C. and Frances D. Crosby, his brother Michael Crosby and sister Ann Lindner.

Raymond Lim, MD

Dr. Raymond Lim, a deeply respected, generous and beloved husband, father and grandfather, passed away January 17, 2012, following a short illness.

Raymond was born June 17, 1937, in Manila, Philippines. He graduated medical school in 1961 at the University of Santo Thomas in Manila. He married the love of his life in 1962, and then moved to the United States. He performed his internship in internal medicine, beginning at Albany Hospital in New York. He and his family later moved to Chicago in 1972, where Raymond worked at Cook County Hospital. He and his family eventually settled in Charleston, WV, where he initially established a private practice. For the last 15 years he served as the chief medical consultant for the Disability Determination Section.

Raymond is survived by his wife, Ofelia.

William Richard McCune, MD

Dr. McCune graduated from West Virginia University in Morgantown and, in 1946, graduated from the Medical College of Virginia. He served in the United States Navy

Following his Navy service, Dr. McCune practiced in Hedgesville, then later in Martinsburg. He returned to medical school at the University of Maryland in Baltimore in 1960, and graduated as a specialist in urology in 1964.

In 1992 Dr. McCune joined the Martinsburg Veterans Administration to attend to patients with urologic problems.

In addition to his parents, he was preceded in death by one brother, Ralph McCune.

He is survived by one daughter, Elizabeth M. Hamrick, and husband, Page Hamrick III; four sons, William Richard McCune Jr. and wife, Judy, Christopher Groves McCune and wife, Ellen, Brance Lindsey McCune and wife, Debbie, and Alex Groves McCune and wife, Tammy; 16 grandchildren; eight great-grandchildren; one brother, Eugene McCune; and, locally, by one sister-in-law, Jody Groves. Mary Lou McCune, his wife of 68 years, died November 6, 2011.

Donations in memory of Dr. McCune may be made to the Shenandoah Area Council of the Boy Scouts of America, 107 Youth Development Court, Winchester, VA 22602.

Elizabeth Uy-Arceo, MD

Elizabeth Uy-Arceo, 72, of Palm Coast, passed away January 27, 2012.

Elizabeth was born in Manila, Philippines, and moved to Charleston, WV in 2000. She earned her Doctorate Degree at the University of Sto. Tomas and practiced as a Pediatrician. Elizabeth was a member of Santa Maria Del Mar Catholic Church and performed a great deal of charity work.

She is survived by her husband of 48 years Dr. Constantino Arceo; daughters Tina Arceo Burriss and her husband Steve of Raleigh, NC.; Toni Arceo of Charleston, WV.; Dina Arceo and her husband, Glenn Yamagata of Greensboro, NC.; Lea Spagarino and her husband, Andres of San Diego, CA; Brothers Vicente Uy of Las Vegas, NV.; Jun Uy and his wife Elsie Cruz - Uy of Palm Coast, ; Antonio Uy of Los Angeles, CA, and six grandchildren.

Donations may be made in Elizabeth's name to: The Leukemia & Lymphoma Society, Donor Services, P.O. Box 4072, Pittsfield, MA 01202 or Florida Hospital Hospice Care, 770 West Granada Blvd., Ormond Beach, FL 32174.

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POSTMASTER: Send address changes to the *West Virginia Medical Journal,* P.O. Box 4106, Charleston, WV 25364.

Periodical postage paid at Charleston, WV.

USPS 676 740 ISSN 0043 - 3284

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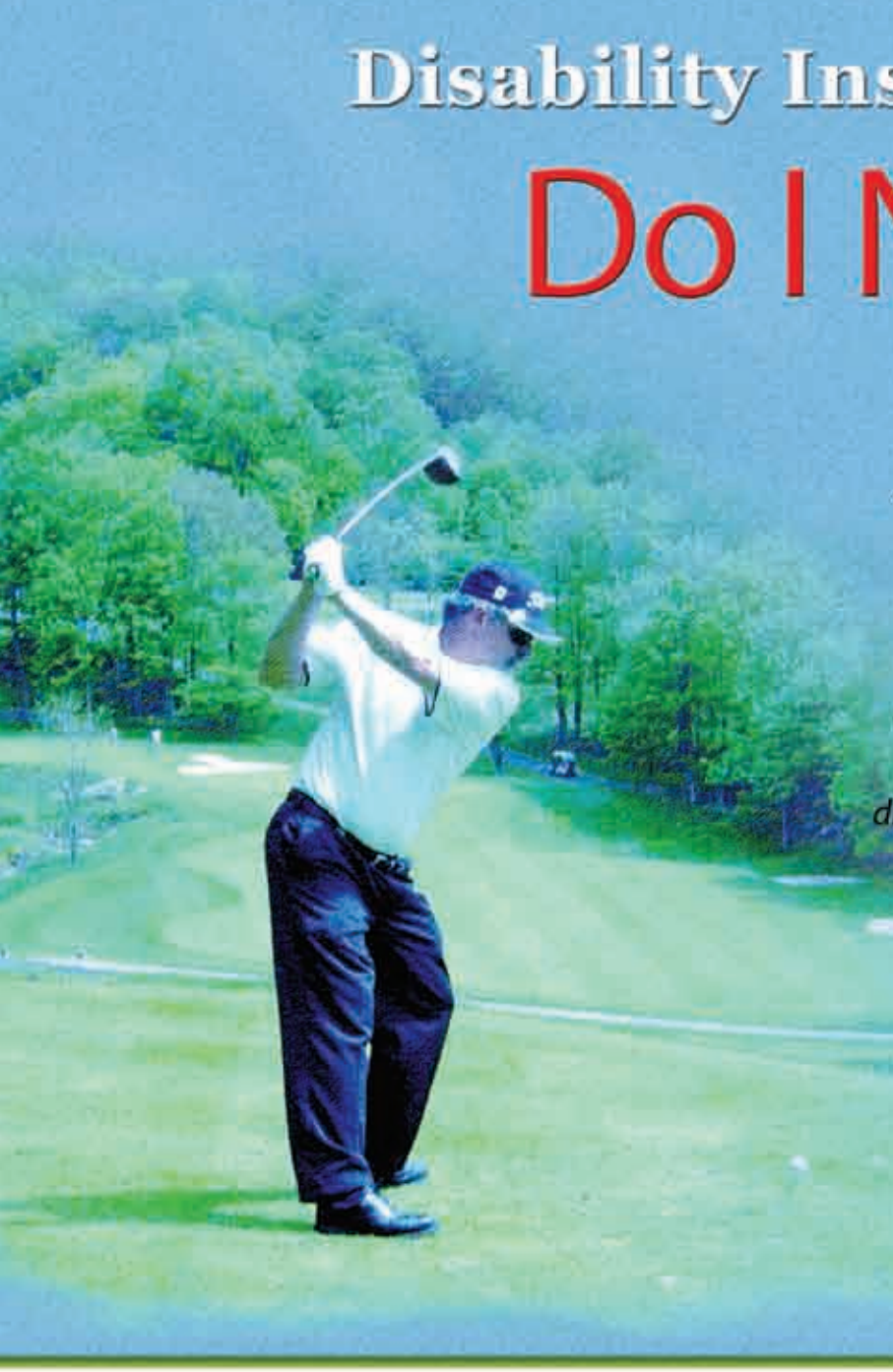

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