

West Virginia

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West Virginia State Medical Association

The Voice of Medicine
in West Virginia



WEST VIRGINIA
State
Medical
Association



WVU Healthcare welcomes
Adam E. Klein, MD
joint replacement specialist

Adam E. Klein, MD, has joined the orthopaedics staff at WVU Healthcare. Dr. Klein specializes in primary and revision joint replacement, and is board certified in orthopaedic surgery.

Dr. Klein earned his medical degree at the Jefferson Medical College in Philadelphia. He completed a residency in orthopaedics and an internship in surgery at the Cleveland Clinic Foundation, and fellowship training in adult reconstruction orthopaedic surgery at Allegheny University Hospitals in Philadelphia.

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***In the News: Emery named
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Sanford Emery, MD, MBA, was named among the top 28 spine surgeons in the country by *Orthopedics This Week*, one of the most widely read publications in the field. Leading spine surgeons were asked to select the finest physicians, teachers, investigators or administrators via telephone survey. Dr. Emery was said to be “an amazing surgeon, leader, and clinical researcher.” Dr. Emery is chair of the WVU Department of Orthopaedic Surgery.



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WVSMA Healthcare Summit
August 24-26, 2012

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President's Message



A Year of Accomplishments

by MaryAnn N. Cater, DO
WVSMA President
2011-2012

As I write this, my final Medical Journal column as your President, I am preparing for the annual AMA meeting in Chicago. The WVSMA delegation is strong! In addition to our tenured Delegates and Alternates to the AMA House, you will be represented at the Resident and Fellow Section, Medical Student Section and the Organized Medical Staff Section. We are championing a resolution we hope will be adopted as AMA policy that prescription database programs (1) remain housed in state healthcare agencies as a clinical tool, not moved to a criminal justice agency as a law enforcement, prosecutorial tool; (2) database information be maintained in a HIPPA compliant manner by the housing agency; and (3) any information released required probable cause be shown that illegal or inappropriate breach of the standard of care has occurred.

Your WVSMA continues to be a leader at both the state and national level in fighting the prescription drug abuse and misuse crisis.

Our own annual meeting, the 2012 Healthcare Summit, is scheduled for August 24-26 at The Greenbrier. This is our state's premier gathering of physicians to learn about the critical issues impacting you, your practice and your patients. This year's program is shaping up to be particularly

strong. Ronald C. Petersen, MD, PhD, one of our nation's leading experts on Alzheimer's Disease will be presenting on the latest research and clinical guidelines. Patrick Morrissey, Esq., a national healthcare law expert who directly participated in the successful challenge to federal healthcare reform in the 11th Circuit Court of Appeals will detail the much anticipated U.S. Supreme Court ruling. Additionally, we will be joined by at least five state medical society presidents from neighboring states and newly installed AMA President, Jeremy A. Lazarus, MD, to discuss new, emerging issues and the actions being taken to preserve the practice of medicine.

I will turn over the reins of the WVSMA presidency at this year's Summit to Hoyt Burdick, MD. Dr. Burdick has been fully engaged in the work of the WVSMA for many years. He will provide outstanding leadership throughout the year to come.

We are living in challenging times, and it is critical that we continue to fight at every level for the policies and programs that are best suited to support our profession and our ability to care for our patients.

Let me highlight just a few of the efforts we championed and accomplished on your behalf this past year.

- ActiveWV 2015 – direct involvement with the development and implementation of an effective statewide WV Physical Activity Plan to provide strategic direction to increase/maintain healthy physical activity of West Virginia citizens.

- Protecting Tort Reform – continued vigilance in fighting to protect our hard-fought medical liability reforms. The 2012 legislative session was the first year in a decade that the trial lawyers proactively introduced legislation to rollback the 2001/2003 reforms that have resulted in lower insurance premiums, enhanced access to care, and the strong physician-led WV Physician Mutual Ins. Co. We were successful this year in fighting the anti-reform efforts, but we should anticipate these same bills will be reintroduced again.

- Opposing Reinstatement of the Provider Tax – as the state's Medicaid budget comes under increased pressure and lawmakers search for new revenue opportunities, word leaked out last fall that state agency insiders were talking about pushing for a Provider Tax. During the first week of the 2012 legislative session, I personally visited every key member of the House and Senate leadership, including the Speaker and President, and many others to make a forceful point that the Provider Tax is bad medicine for West Virginia, and we adamantly opposed its

reinstatement. The onerous Provider Tax never reared its ugly head.

- Fighting Prescription Drug Abuse – significant involvement in molding and shaping the comprehensive prescription drug legislation enacted by the West Virginia Legislature. While no bill is perfect, many of the provisions of SB 437 were suggestions we made to fight this epidemic. We were also able to stop efforts to include provisions in the bill that pointed a ‘shame and blame’ finger at the medical community that would have imposed new, unnecessary obligations on physicians that were not in the best interest of quality patient care.

- New Collaborative Effort – coordinating with the Boards of Medicine and Osteopathy and the Osteopathic Society to establish a quality CME program to meet the state’s new drug diversion continuing education requirement. The groundwork has been laid for a significant statewide conference later this fall, again showing strong physician community leadership.

- WESPAC – surveyed all legislative candidates in the May 2012

West Virginia Primary Election and gave PAC support to those candidates who support pro-physician/ pro-patient policies. Eighty-seven percent of our WESPAC endorsed candidates won nomination. The 2012 election cycle is particularly important. Two seats on our five-member State Supreme Court will be filled during this election. We are busy with the strategic planning of the General Election endorsement, fund-raising and awareness plans.

- West Virginia Medical Foundation – awarded the first Kathleen Fortunato Memorial Scholarship grant to Gargi Bajpayee, a 4th year medical student. Kathy Fortunato was a true champion for the medical community and a community health improvement advocate. The memorial scholarship established in her honor is a lasting legacy that will provide much needed financial support to a deserving medical student. This year’s recipient has a distinguished record of achievements and a passionate pursuit through her medical education to care for others.

- Medical Journal and Practice Advocacy – published a special CME

issue, The Art, Science and Ethics of Prevention, continuing our mission of promoting excellence in medical research. For over one hundred years, the Medical Journal is our state’s only clinical peer-reviewed publication. New education and training programs were added to our physician practice advocacy efforts to provide national certification opportunities for office practice personnel. These programs and the services of our full-time practice advocate help physicians and office personnel resolve the daily time-consuming issues that distract from direct patient care.

This is just a short list of our work and accomplishments over the last year. I sincerely appreciate the opportunity the presidency of our state’s largest physician advocacy organization provided me. I was fortunate to visit many county medical societies throughout the state and travel to the annual meetings in many of our neighboring states and the AMA. Your WVSMA is strong, proactive and proudly represents you and our profession, and I thank-you for this distinct honor and pleasure.

You won't want to miss this event!

See page 52 for featured speakers, special programs and events!

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24-26

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TIMES are CHANGING

Curmudgeon def. - crusty, ill-tempered old man.

We all see medicine changing all around us. Some of these changes are instantaneous and some take a while. In the thirty odd years since we finished medical school things have changed in ways we could never imagine. Almost all of this was witnessed from our billets here in Morgantown where we've been fortunate enough to be perched for almost all of that time. Of course, the new technology we've seen come on line is incredible! We remember the first CT scanner in northern WV, the year we were interns in Morgantown—1977. Fortunately or rather despite all the new “stuff” our “Art” and the patients haven't changed all that much...both still require a caring and available Doctor.

One of the best things about our kind of jobs, as we've come to realize in the last few years, is we get to talk to medical students and residents—quite a bit. We bet we've “been around” well over 3000 of them in the last three decades. They are a very bright lot; you'd be surprised what you can learn from them, if you just listen. This last few weeks in one of our offices, one of us talked to several students that told us something we'd never heard until the last couple of years. They now, it seems, are worried about how long it will take them to finish their residencies. It seems they don't

want to put their lives on hold any longer than necessary...and they are worried about work hours during residency and after they finish. Now this latest group we talked to were women, but we've been hearing the same thing from the men. By the way, about half the class are women at WVU—definitely a good thing.

But something else is changing here. On a level much more profound than the technological things we always seem to talk about in pieces from places like this. To begin with, the residents and students themselves have changed. We think they are smarter than we were. At least 'book smart.' Every year their entrance exam scores go up. And they certainly have more debt than many of us did. The average WVU medical student now graduates owing \$152,000, we think we owed \$5000 when we finished. Students now openly admit that potential future income modifies their post graduate training choices, and who can blame them with the debt they have?

They also come from a different background than us. These kids likely grew up without a parent in the house that could remember the great depression. Very few of them are in the first generation of their family to go to college.

They are probably smarter than us in other ways too. There is a lot

of talk about “Generation X” or “Generation whatever” but these kids grew up in a different environment that we did. We're not sure what that means, but some of these kids talk about “lifestyle”, a term we never heard in the context of Medicine from faculty, house staff or students till a few years ago. When they enter training, they now have nationally mandated limits on the numbers of hours they work and in some instances how many patients they can care for. For the first time we are hearing from newly finished house staff that the hours they must work are too long in private practice.

We thought the “lifestyle” we had as house officers and students was pretty good 30 years ago, some of us think of it as the most fun we ever had, but we probably didn't know any better. We don't believe Dr. Flink would have recognized that term “lifestyle”. He told us we could go home when the patients had been taken care of.

James E. Brick, MD
EB Flink Professor and
Chairman of Medicine

John F. Brick, MD
Professor and Chairman of Neurology
WVU School of Medicine

Pain Treatment Creating Pain

by Dominic Gaziano, MD, FCCP

As the 50-year anniversary of my graduation from medical school approaches, I have witnessed many advances in medical care and management. However, my recent practice has brought me face-to-face with gross distortions of medical practice as it relates to pain management.

As a State tuberculosis consultant I have been to communities where half of the residents are addicted to opiates and the other half are dealing in drugs. I have seen an instance where identical twins, one of each, are being cared for by their two grandmothers because both parents are engaged in drug-seeking behavior. In a pre-employment exam that I conducted, a coal miner had been receiving Oxycontin for nine months because of a bump on the head that could have easily been handled with two aspirins. I would not approve this miner's pre-employment physical until his treating physician stated in writing that the opiate treatment had been discontinued. I recently noted that an opiate prescribed for post dental extractions provided refills for six months when a six-day course of treatment would have been adequate.

In the 1990's, when legislation was passed requiring all physicians to take a course on pain management, I remarked to a colleague that I knew how to provide opiates for pain, having been trained in the 1960's: that is -to provide one week of opiate for post-surgical care, twenty-

five days for post-trauma, and as much opiate as necessary to relieve symptoms and pain in those with advanced cancers. The deviation from this protocol has resulted in not the alleviation of disease but the creation of a new disease where individuals, by misguided treatment of pain, become dysfunctional, dependent and larcenous.

I am unsure of the extent practicing physicians contribute to this epidemic of substance abuse, however, I believe it is time we reassess concepts of pain management and I would like to offer three items for consideration.

1. Pain does not have to be completely eliminated in our lives. Pain represents life and is something that does not need to be eliminated at all costs. I wake up each morning with low back pain to the degree that I am unable to bend to dress and to easily conduct my work for several hours. Yet, as the morning wears on the pain subsides. I would not trade my morning pain for a life of drug-seeking behavior and invalidism.

2. It has been established that most pain is just as effectively treated with non-steroidal anti-inflammatory agents rather than addicting opiate drugs. Most pain that is treated by a physician due to degenerative diseases and fibromuscular disorders should be exclusively managed by the use of non-steroidal or acetaminophen drugs. The use of opiates is often prescribed inasmuch as their recipients prefer them since

they provide a measure of euphoria in addition to the analgesic properties. They are provided to patients for this particular effect. I have noted that many of those dependent on opiate drugs feel this dependency is okay because a physician has prescribed it.

3. There are individuals who are marginally functioning with mental or cognitive problems. These individuals are easily tipped over into a complicating addiction when opiates are prescribed inappropriately. They are unable to handle this added distortion of their life.

It is because drug addiction and its adverse consequences have become so deep and widespread that I believe opiate prescribing should revert to the practice of a former time. For the vast majority of pain opiates should not be prescribed. Opiates should be limited to brief periods of time postoperatively and post-traumatically. Generous and liberal use of opiates should be given to those with advanced or terminal malignancies or uncommon medical conditions where intense suffering is a part of the disease, such as advanced ALS. In writing an opiate prescription a physician should ask himself "could I not relieve this person's symptoms without running the real risk of creating addiction, drug-seeking behavior, illegal activities, and the consequence of individual and family disintegration?"

Increasing Prevalence of Anterior Cruciate Ligament Injuries in a Collegiate Population

Mathew W. Lively, DO

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Geisinger Health System*

Abstract

Objective: To detect a possible increasing trend in the annual prevalence of anterior cruciate ligament (ACL) injuries in a collegiate population and whether gender, sport, or year of the participant was predictive of a prior ACL injury.

Design: Retrospective case series

Setting: West Virginia University

Participants: Review of 3,079

physical examination forms for prior ACL injury in athletes presenting for collegiate participation from 1996-2008.

Main Outcome Measures: Presence or absence of ACL injury at presentation for preparticipation physical examination.

Results: There was a slight increase in the annual prevalence of ACL injuries over the study period. Gender and sport of the participant were not predictive of a prior ACL injury.

Conclusions: Prevalence of ACL injuries increased over time in the population. Further research is needed to determine if this result is reflective of a growing national trend in athletes with a prior ACL injury presenting for collegiate participation.

Introduction

Rupture of the anterior cruciate ligament (ACL) from sports participation has been the focus of many studies in recent years with most centering on the difference in incidence between male and female athletes. Although the overall rate of ACL injuries has remained stable in the collegiate population¹⁻³ and possibly increased in high school populations,⁴ most studies confirm that female athletes, at all levels of participation, suffer ACL injuries at

a significantly higher rate than their male counterparts.¹⁻⁹ An increased injury rate in high school athletes coupled with a rising number of athletes participating in high school sports could result in a larger number of ACL-injured athletes presenting for collegiate participation.

The purpose of this study is to detect a potential increasing trend in the annual prevalence of ACL injuries in a collegiate population over a thirteen-year period and whether the gender, sport, or year of participation was predictive of a prior ACL injury.

Methods

All athletes at our institution are required to undergo a physical examination prior to the start of their participation. The process includes questions about previous joint injuries and a detailed musculoskeletal examination by either a team physician or a nationally certified athletic trainer. At the time of the physical examination, the presence of a previous ACL injury, the year it occurred, and whether or not it was surgically reconstructed was noted on the examination form. One of the authors reviewed all examination forms prior to the athlete being cleared for participation. The form was then placed in the athlete's medical record.

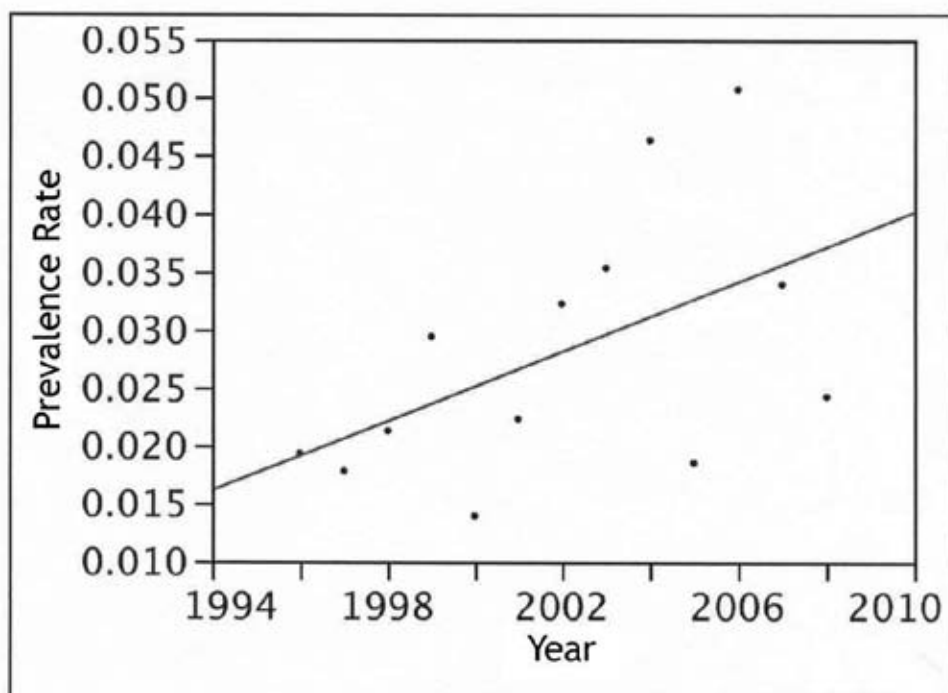
A retrospective review of all examination forms from 1996-2008 was performed with documentation made of previous ACL injuries, the gender of the athlete and the sport involved. An athlete suffering more than one ACL injury was recorded as a single occurrence for the purposes of determining the prevalence rate.

The study protocol was approved by the institutional review board.

Statistical analysis was performed using a multiple logistic regression model with a two-level dependent variable of presence or absence of an ACL injury and independent variables of sport, gender and year. A simple linear regression model was utilized to show trends in the annual prevalence rate of ACL injuries over time.

Results

A total of 3,079 preparticipation physical examinations were performed from 1996-2008. Seventy-seven athletes (2.5%) had a prior ACL injury with football and soccer alone accounting for 46 of the total number of ACL injuries. The number of ACL injuries by sport and gender is presented in Table 1 and the number of ACL injuries per year is listed in Table 2. Independent predictors of sport ($p=0.41$) and gender ($p=0.71$) were not statistically significant in explaining the variability in ACL injury. However, the independent predictor of year ($p=0.02$) was statistically significant in explaining injury variability. The graph of a simple linear regression model performed for the prevalence rate of ACL injury per year is illustrated in Figure 1. Sport and gender were excluded from the linear regression model given no statistical significance. The odds of an ACL injury being present showed a slight increase of 1.1 per year resulting in an increasing trend in the prevalence rate over the study period. Across the entire thirteen year period, athletes in 2008 had a 2.7 greater odds



of having a previous ACL injury versus those who arrived in 1996.

Discussion

The results of this study show a slight increase in the annual prevalence rate of ACL injuries in a collegiate population over a thirteen year period ending in 2008. Neither the gender nor the sport of the participant was a predictive of the

presence of an ACL injury at the time of the preparticipation examination.

As the large majority of athletes presenting for a preparticipation examination at our institution are direct high school graduates as opposed to transfers from another college, our yearly prevalence could be a reflection of changes in the incidence of ACL injuries in high school athletics. Most of the

literature on high school knee injuries cover the time period between 1995 and 2006^{4,8,10,11} corresponding well with the 1996-2008 time frame in our study. Comparison of overall data between high school and college is difficult, though, because most studies, either high school or collegiate, focus primarily on the incidence of ACL injuries in basketball and soccer alone. Also, there is limited high school data on the rate of ACL injuries over time as most studies examine only total number of injuries during a specific time period.

Micheli et al⁴ did study the number of high school athletes undergoing ACL reconstructive surgery for soccer and basketball from 1992-1997. Their data showed an increase over time in the number of ACL surgeries for both genders but females had a significantly higher incidence of surgery over males in both soccer and basketball.⁴ Other studies^{8,10-12} also support a higher incidence of knee surgeries in female high school athletes compared to their male counterparts. Figures from the National Federation of State High School Associations show a 61.3% increase in the number of females participating in high school soccer from 1995-2007 compared with an increase in male participation of 33.2%.¹³ Although not as large, most high school sports also show increases in the number of participants over the same time period. A larger number of competing high school athletes coupled with an increasing rate of ACL surgeries could result in more athletes presenting to college with a prior ACL injury. Although our study showed that sport and gender were not predictive of a prior ACL injury, it seems reasonable to assume the increased annual prevalence of injury in our study is reflective of an underlying rising incidence of injury in high school athletics. Another

Table 1. ACL Injury by Sport and Gender

Sport	Number of Athletes	Number with ACL Injury	Male		Female	
			Total	#ACL	Total	#ACL
Football	745	28	745	28	0	0
Soccer	413	18	203	7	210	11
Baseball	256	6	256	6	0	0
Track	253	6	122	2	131	4
Basketball	157	3	82	0	75	3
Cheerleading	190	5	85	2	105	3
Swimming	234	3	137	0	97	3
Dance	46	2	0	0	46	2
Wrestling	248	2	248	2	0	0
Cross Country	99	1	34	0	65	1
Rowing	174	1	0	0	174	1
Volleyball	65	1	0	0	65	1
Gymnastics	77	1	0	0	77	1
Rifle	41	0	28	0	13	0
Tennis	81	0	26	0	55	0
Total	3079	77	1966	47	1113	30

Table 2. ACL Injury by Year

Year of Exam	Number of ACL Injuries	Number of Athletes
1996	4	238
1997	4	259
1998	4	228
1999	7	269
2000	2	173
2001	5	254
2002	8	284
2003	7	224
2004	10	240
2005	4	241
2006	11	244
2007	6	190
2008	5	235
Total	77	3079

possible explanation is the number of high school ACL injuries has not increased, but instead, more athletes are continuing participation after injury than in previous years. Data from the National Football League (NFL) combine physicals show that the odds of failing an examination at the professional level due to an ACL injury has declined over time.¹⁴ Future research looking at the rate of high school ACL injuries over time would be helpful in determining the source of a rising prevalence in college athletes.

In collegiate athletes, the overall rate of ACL injury has remained stable since 1989¹⁻³ but females continue to show a 2- to 4- fold increase in the incidence of ACL injuries compared to males.^{1-3,5-7,9} In our study, football players had the highest number of ACL injuries, but female soccer athletes had a higher percentage of injuries per participant. Due to the wide variation in number of participants, direct statistical comparison between sports was not performed in this study.

There are limitations to this study. One is that the results are from one institution; our data may not be indicative of an increasing prevalence in ACL injuries on a national scale. Similar studies from other institutions would aid in confirming the results of this study. Another limitation is

that no documentation was made on the physical examination form of how the athlete originally injured the ACL. As such, we cannot determine if athletes were participating in the same sport at the time of injury as they desired to play in college. It is also possible the athletes suffered the ACL injury during conditioning activity that may not have been directly related to their specific sport activity. Due to these limitations, the study was designed to reflect only the overall prevalence of ACL injuries at presentation to collegiate athletics. The data was also obtained in part from athlete recall, although the impact of this potential error should have been minimized by the fact that all athletes underwent a physical examination of the knee by an experienced operator who should have been able to detect an unreported ACL deficit knee and/or observed the presence of a scar from a ligament reconstruction.

The results of this study show an increasing prevalence of ACL injuries in a specific collegiate population. If these findings are reflective of a general trend in collegiate athletics, it lends support to initiating prevention strategies in high school athletes since such programs can reduce the rate of ACL injuries, particularly in female athletes.¹⁵

Enjoy A Good Read!

HISTORIC OLD-TIME WEST VIRGINIA



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by Harold D. Almond, MD

Tender Loving Care: Stories of a West Virginia Doctor, Volume Two
by Greenbrier Almond, MD

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Further research on the incidence of ACL injuries over time at the high school level would be helpful in determining whether an increase in the collegiate prevalence is due to an overall increase in high school injuries versus more athletes continuing participation after injury than in previous years – or a combination of both factors.

Conclusion

The results of this study show an increasing prevalence over time of ACL injuries in a collegiate population. Sport and gender of the participant were not predictive of the presence of an ACL injury at the time of the preparticipation examination. Further research is needed to confirm whether these results reflect a growing trend in the number of collegiate athletes presenting for participation with a prior ACL injury.

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to give the business side
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An Unusual Form of Listerial CNS Infection

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Abstract

Listeria monocytogenes is a known cause of meningitis, but cerebral abscess formation is exceedingly rare. We describe a patient who presented with an unsteady gait and a small ring-enhancing lesion in the right parietal lobe. Pathologic evaluation demonstrated an abscess with associated microglial nodules, and culture revealed *Listeria*. In spite of the rarity of this entity, immunosuppression has been noted to be a predisposing factor. Our patient had diabetes mellitus and chronic obstructive pulmonary disease with recent prednisone administration, both very common ailments in the population of West Virginia.

Introduction

Brain abscesses are a well-known entity and can occur in immunocompromised patients. Listerial abscess, however, represents a very rare form of brain abscess, which presents in unusual ways and has unusual pathologic manifestations, and can complicate or delay the diagnosis.

Case Presentation

A 42-year-old woman presented to the emergency room of a referring facility with a history of an unsteady gait for the past 1 ½ weeks and headaches for the past month which awakened her from sleep. She also noted intermittent neck stiffness, somnolence, and blurry vision. There was no weakness, numbness, or speech problems. Her past medical history was significant for diabetes mellitus, chronic obstructive pulmonary disease (COPD) with exacerbation one month prior to

presentation, for which she received IV ceftriaxone for one week and prednisone; cervical cancer in 1988, and a history of smoking 1 ½ packs per day for 35 years. She had no history of other malignancies or of intravenous drug abuse.

Physical examination revealed her to be alert and oriented with fluent speech and a good memory and fund of knowledge. Her pupils were equally round and reactive to light, cranial nerves were intact, sensation was normal, and reflexes were symmetric. She displayed no pronator drift and had good strength, but she did demonstrate difficulty with tandem walking. Imaging studies revealed a lobulated, ring-enhancing lesion with surrounding edema in the left parietal lobe (Figure 1). Metastatic and infectious work ups were negative.

A stereotactic brain biopsy was performed. Sections from the biopsy demonstrated necrotic brain tissue with an associated neutrophilic inflammatory infiltrate (Figure 2). The surrounding tissue was gliotic and contained a mixed inflammatory infiltrate including perivascular lymphocytes and plasma cells as well as microglial cells with loose microglial nodule formation (Figure 3). Gram stain revealed a Gram-positive bacillus, with subsequent culture confirming *Listeria monocytogenes*.

Discussion

Listeria monocytogenes is a Gram-positive bacillus which is facultatively anaerobic and non-spore-forming. It demonstrates “tumbling motility”.¹ It is an intracellular pathogen which causes disease in a variety of animals and humans.² Ingestion of contaminated food including inadequately chilled salads, meats,

and dairy products is considered the main source.² One to five percent of humans are asymptomatic intestinal carriers.¹ Upon ingestion, the bacteria enter the bloodstream through mesenteric lymph nodes.^{1,2,3}

CNS involvement by *Listeria* has been well-characterized.¹ Most commonly CNS involvement manifests as meningitis and it is considered the fourth most common etiology of meningitis.¹ A distinctive form of rhombencephalitis also exists, manifesting as asymmetric cranial nerve palsies, hemiparesis, and coma.³

Cerebral abscess formation results from invasion of cerebral capillary endothelium by infected macrophages.² This occurs most often in the region of the middle cerebral artery territory and represents a different pathogenesis from that of listerial meningitis, which is caused by entry through the epithelium of the choroid plexus.²

Forty reports of listerial brain abscesses have been reported, 30 of which were solitary lesions as in our patient.² The majority of these occurred in the frontal or parietal lobes.³ In these previously reported patients, various forms of immunosuppression were common predisposing factors. Disorders of cell-mediated immunity are considered particularly important.³ Seven patients had a hematologic malignancy, six had renal or cardiac transplants, six had diabetes mellitus, and three had AIDS.² Asthma, sarcoidosis, COPD, hepatic cirrhosis, rheumatoid arthritis, and Crohn’s disease were also present.^{2,4} Our patient had both diabetes mellitus and COPD as predisposing factors. The mean age of presentation was 44 years of age. In contrast to our

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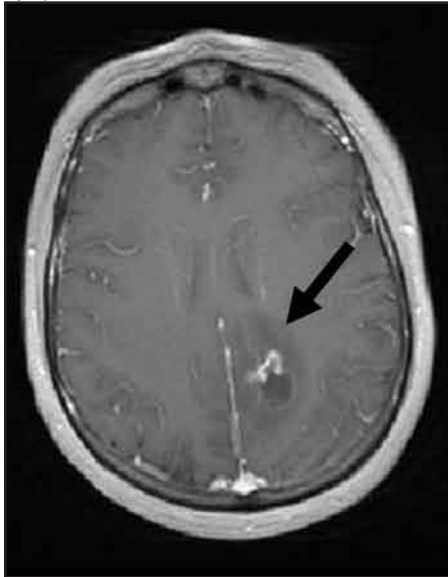
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Figure 1.

Axial, contrast-enhanced MRI showing an irregular, ring-enhancing lesion in the left parietal lobe.



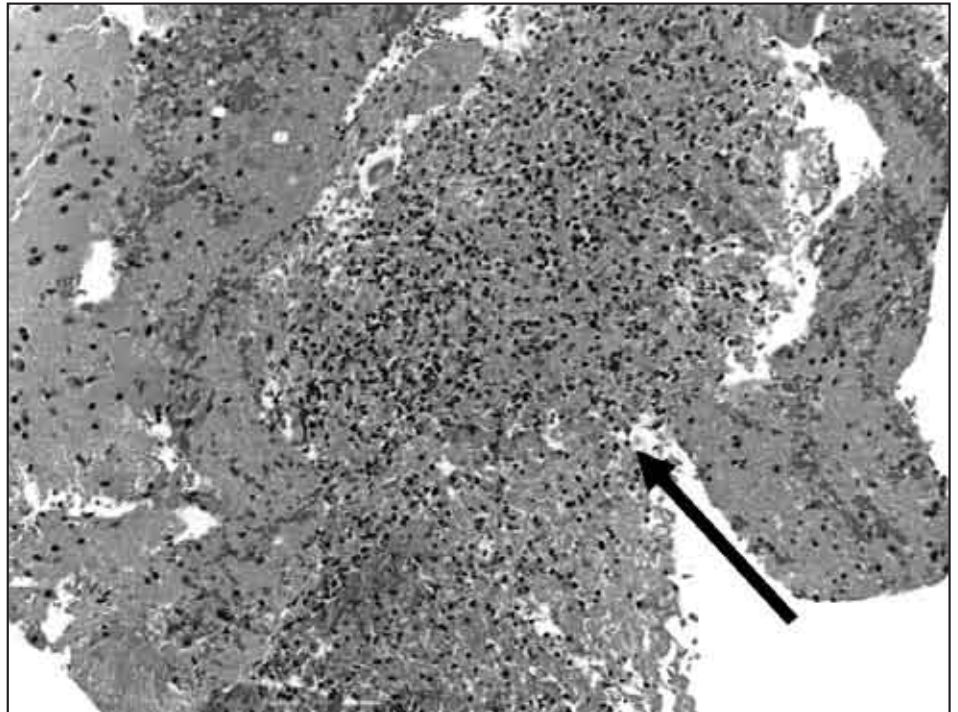
case, ninety percent of patients with listerial abscesses were male.²

Presentation of patients is most often due to rapid onset of symptoms, with 88% of reported cases having symptoms for two weeks or less.³ This is consistent with our patient's complaints of gait difficulty for 1½ weeks prior to presentation. Most have had fevers, and all have had abnormal neurologic findings.³ Although our patient presented with classic headaches suggesting an intracranial mass lesion, headache was a less common presenting symptom among patients with listerial abscesses than in those with other brain abscesses.³ It has been demonstrated that blood cultures are more often positive in these patients than in other patients with brain abscesses.^{1,2,3,5} In one series, 86% had positive blood cultures.³

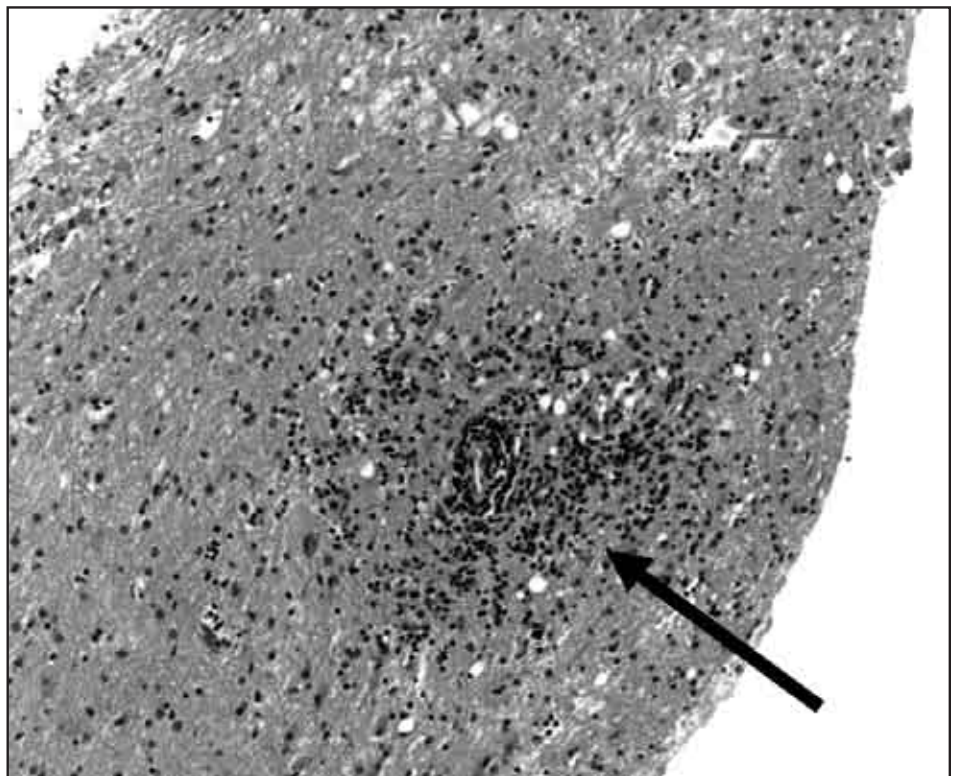
Prognosis in these patients is guarded, with an approximately 40% mortality rate attributed to the infection.² Of the survivors, 61% in previous series have had residual neurologic deficits.³ Most reported deaths due to listerial

Figure 2.

Hematoxylin and Eosin stained surgical specimen showing necrotic brain with an associated neutrophilic inflammatory infiltrate.

**Figure 3.**

Hematoxylin and Eosin stained surgical specimen showing perivascular lymphocytes and loose microglial nodule formation, indicated by a black arrow.



abscesses occurred within a month of diagnosis and while the patient was taking appropriate antibiotics.³ Only one patient who died from a listerial abscess had a neurosurgical procedure, which likely points to the importance of surgical drainage of these lesions.³

Treatment often includes neurosurgical drainage of lesions greater than 2.5 cm in size.³ Antimicrobial therapy must also be initiated, with the most effective treatment reported in the literature being ampicillin with gentamycin.^{1,2,3,4,5} Relapse in one patient was attributed to treatment with ampicillin alone, although two reported patients were successfully treated with this regimen.¹ Second-line agents include vancomycin and Bactrim.^{1,2,3} Duration of therapy has been reported from two weeks to 14 months.³ Due to the toxicity of gentamycin, it was decided to treat our patient with an 8 week course of ampicillin alone. She did well with this treatment and follow up MRI demonstrated resolution of the lesion, and her symptoms did not return.

The pathology of listerial abscesses has not been

well-characterized, however several studies have examined the pathological appearance of listerial rhombencephalitis in both humans and ruminants.^{6,7} Listerial rhombencephalitis is thought to occur through a unique mechanism of infection through injured oral mucosa with retrograde axonal transport along cranial nerves.⁶ Pathological studies of these cases have revealed microglial cells as well as microabscesses with neutrophils and macrophages.^{6,7} Occasional necrotic neurons and neuronophagia were also present.^{6,7} Significant to our case, microglial nodules were seen in several cases, consisting of microglial cells and T-lymphocytes.⁶ Microglial nodules are rare in brain abscesses due to other infectious etiologies.

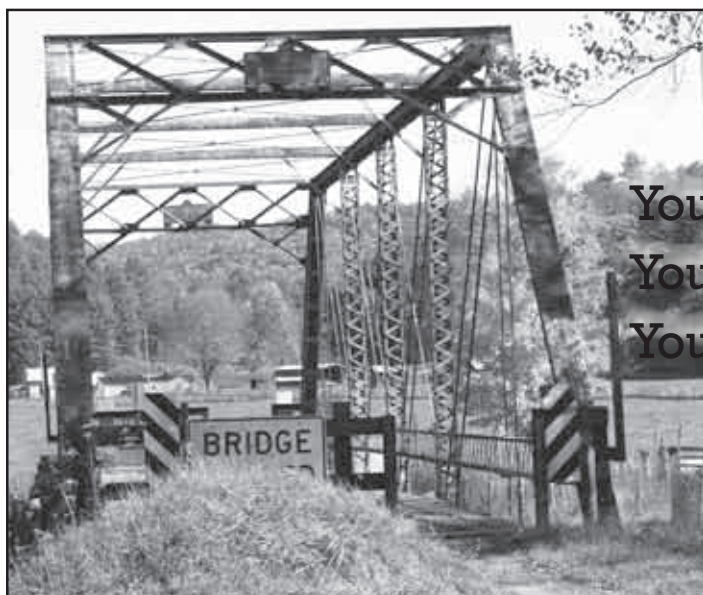
Conclusion

Listerial brain abscesses are an unusual neurologic manifestation of *Listeria* infection. These infections may have a complicated clinical and pathological picture. The propensity to occur in the immunocompromised host has been recognized, and in particular, this infection can occur in

the settings of diabetes mellitus and COPD, two common predisposing conditions found in West Virginia.

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Atypical Presentation of Frontotemporal Dementia Masquerading as Bipolar Disorder and Substance Abuse: A Case Report

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Abstract

This is the case of a 44 year old man with frontotemporal lobar dementia whose presentation was consistent with Bipolar Affective Disorder with psychosis in addition to ongoing substance abuse. Despite extended periods of sobriety and multiple medications to target Bipolar Disorder, his symptoms remained refractory. With repeated brain imaging and progression of the disease, frontotemporal dementia was diagnosed. The patient went on to develop Amyotrophic Lateral Sclerosis (ALS), which is known to overlap the neuropathological features with frontotemporal lobar dementia.⁶ Respiratory compromise ultimately led to this patient's death, which was deemed secondary to ALS. This case demonstrates the need for clinicians to recognize differential diagnoses in manic and psychotic symptoms resistant to polypharmacy.

Introduction

The symptoms of impaired executive functioning, psychosis, affective dysregulation, concurrent with substance abuse, present clinicians with a broad list of differential diagnoses. Once all metabolic and organic medical causes have been excluded, there still remain several psychiatric illnesses of possible etiology. When taking into account ongoing substance abuse with mood dysregulation in a 44 year old man without previous history of impairments, the diagnosis of dementia falls low on the differential list. Frontotemporal lobar dementia is the second most common dementia after Alzheimer's affecting persons in middle age, and

accounts for up to 20% of presenile dementia cases.² Frontotemporal lobar degeneration is a broad diagnostic term that encompasses multiple distinct forms of a dementia syndrome, with the three major subtypes being frontotemporal dementia, semantic dementia (concept based memory loss), and primary progressive aphasia. Depending on the clinical subtype, these individuals can present in a number of ways including behavioral problems, memory disturbances, and language dysfunction. It is the opinion of this examiner that the early onset of symptoms with impulsivity and thoughtless behaviors, with concurrent alcohol and benzodiazepine abuse, had delayed the diagnosis of this relatively rare disease.

Case Report

The patient was a 44 year old male who presented to the emergency department after court ordered detainment for mental hygiene evaluation due to the man's increasingly bizarre behaviors. The petitioner described a two year history of worsening paranoia of friends and business contacts (noted to be a successful architect), delusions that UFO's were following him, and that he was visited by his deceased father and grandfather. In addition to these symptoms, it was reported that his alcohol consumption had increased in frequency, resulting in risk taking and careless behaviors exemplified by driving while intoxicated; he also had been abusing a Temazepam

prescription. Physical examination, laboratory work, and brain imaging were negative for organic, infectious, or metabolic etiology. Diagnostic clarification was consistent with late onset Bipolar disorder type I, manic with psychotic features and abuse of alcohol and benzodiazepines that started when his mania progressed. Despite reports of sobriety spanning several months along with numerous psychotropic medication trials with mood stabilizers, anti-psychotics, and anti-epileptic drugs, his manic and psychotic symptoms remained refractory. Over the ensuing 6 to 12 months, his bizarre behaviors and psychosis continued, however with elevated aggression, such as threatening family members with knives. Objective findings with subsequent admissions were significant for psychomotor retardation, slow perseverative speech, and impaired concentration and memory on mental status examination. MRI of the brain repeated sixteen months later demonstrated slight progression of atrophy in the tempoparietal regions that was very subtle on previous imaging. Follow up study with PET CT of the brain demonstrated abnormal metabolic decrease throughout the brain, though with strikingly decreased metabolic activity symmetrically in bilateral frontal and anterior temporal lobes. The brain imaging findings in the setting of decline in social conduct and departure from customary behavior, all supported the eventual diagnosis of frontotemporal lobar dementia. Ultimately, the aggressive behaviors were treated with

pharmacotherapy and supportive services were established.

Discussion

Frontotemporal lobar dementia is a neuropathological disorder involving degeneration of the frontal and/or temporal lobes, sometimes involving the parietal lobes. Age of onset is most common between 45 and 65. There is an equal incidence between men and women.² The most common clinical findings include personality changes, dramatic changes in social conduct and behaviors, and language abnormalities.

Frontotemporal lobar degeneration is a diagnostic term that encompasses multiple distinct forms of this dementia syndrome, with the three major subtypes being frontotemporal dementia, semantic dementia, and primary progressive aphasia. For purposes of this case report, the frontotemporal dementia behavioral variant will be the focus. Frontotemporal dementia behavioral variant is the most common diagnostic subgroup, with over half of the diagnoses falling under this category.³ It has been further proposed that among the behavioral variants of frontotemporal dementia, distinct anatomical patterns of grey matter loss directly correlate with an even more detailed classification of the behavioral variant subtype. Studies have demonstrated that depending on the general location of atrophy, several variants of behavior abnormalities can result. For example, frontal dominate atrophy is found to have significant dysfunction of executive functions. Temporal dominate atrophy has clinical findings with significantly worse memory performance. When involved, parietal lobe atrophy often presents with aphasia.¹ It is critical to keep these behavioral variant subtypes in mind when evaluating

the above patient. When the patient initially presented, there were only subtle findings of fronto-temporal-parietal atrophy on MRI imaging. However, with disease advancement evident by clinical deterioration, repeat imaging revealed significant progression in atrophy of the frontal and temporal lobes, though with generalized atrophy being noted.

In hindsight, the findings of this patient's executive dysfunction directly correlated with his frontotemporal atrophy. However, arriving at this patient's diagnosis was a difficult task for various reasons. First of all, his youth at age 44 was atypical in itself for frontotemporal lobar dementia. His concurrent use of alcohol also confounded the evaluators, given that intoxication and recurrent use clearly impact executive functions and memory. Additionally, the symptoms of grandiosity, distractibility, psychomotor agitation, and his thoughtless behaviors with gratifying a need to engage in pleasurable activity, all lead evaluations toward an alternative diagnosis of a manic episode, and consequently a diagnosis of bipolar disorder. It was not until after disease progression in spite of multiple medication trials, and repeated imaging demonstrating the increased brain atrophy, did the diagnosis of frontotemporal lobar degeneration declare itself.

Conclusion

Frontotemporal lobar dementia is a relatively rare disorder that presents with a number of symptoms, many of which overlap those similar to mania, psychosis, and substance abuse disorders. When clinicians do not constantly maintain a differential diagnosis, especially in patients resistant to appropriate pharmacotherapy, the diagnosis can often be delayed or even missed.

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Automated External Defibrillators in West Virginia Schools

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Abstract

Introduction: Sudden death, particularly when occurring in children and adolescents, is a traumatic event not only for the victim's family, but for the entire community. It has been shown that school-based automated external defibrillator (AED) programs provide a high survival rate for both students and nonstudents who suffer sudden cardiac arrest (SCA) on school grounds. The use of AEDs is becoming increasingly more common in schools in the United States. In West Virginia middle and high schools, we analyzed the prevalence and use of AEDs, barriers to obtaining a device, and cases of sudden death on school grounds.

Methods: A mailed survey distributed to West Virginia high schools and middle schools collected general demographic data, AED data, and occurrences of sudden death on school grounds. Schools reporting a death were contacted to obtain details regarding the event. For schools with a device, the number of AEDs, length of possession, reasons for and means of obtaining the AED, personnel trained to operate the AED and the number of device uses were determined. For schools without an AED, barriers to and interest in obtaining a device were determined.

Results: Two hundred and twenty-five of 312 surveys (72%) were returned. One hundred and fifty-two schools (68%) currently have at least one AED and 73 schools (32%) do not have an AED. Public high schools had the highest prevalence of AEDs (76%) compared to public middle schools (62%) and private schools (67%). Sixty-nine percent of schools obtained their devices by donations or grants and 32% obtained them using school funds. Barriers to

obtaining a device included cost (82%), lack of trained personnel (45%), unfamiliarity with AED (22%), and liability issues (19%). There were a total of 23 deaths on school premises reported by 20 schools. There was one reported occurrence of an AED being used to save a life.

Conclusion: Over two thirds of West Virginia middle schools and high schools currently have at least one AED on their premises. An AED is an effective way of preventing death following sudden cardiac arrest, and has saved at least one life in a West Virginia school. While most schools without AEDs cite cost as the main deterrent, the majority of schools with a device received them via donation or grant. We submit that a number of sudden deaths on West Virginia school grounds could possibly have been averted by use of an AED.

Introduction

Sudden death of a child or young adult has a devastating effect on the victim's family, school and community. The most important factor in determining survival following sudden cardiac arrest (SCA) is time from collapse to defibrillation.¹⁻³ Survival benefit has been demonstrated with the use of school-based automated external defibrillators (AED) for both students and nonstudents suffering SCA.¹ In instances where early defibrillation can mean the difference between life and death, education and training of school based AED programs are of utmost importance.

The use of AEDs is becoming increasingly more common in schools in the United States. To date, there are at least 15 states with legislative mandates requiring or supporting AED placement in schools.⁴ West Virginia is not yet one of those states. The American Heart Association and other national organizations have set guidelines for the implementation of school-based AED programs.³ These mandates,

in concert with parental and community efforts, coincide with an increased prevalence and utilization of AEDs in the nation's schools.

With this in mind, we aimed to assess the prevalence of AEDs in West Virginia schools, examine barriers to obtaining them, and analyze occurrences of sudden death that occurred on school premises in West Virginia. We also reviewed current American Heart Association recommendations on AED program implementation in schools.

Methods

Study Design

This study is a cross-sectional survey distributed to public and private high schools and middle schools in the state of West Virginia. The surveys were mailed to the principals of these schools, to be completed by them or a designated substitute. A second request survey was sent one month later to the schools that did not initially respond. The decision to use mailed surveys instead of electronic surveys via the Internet was made based on the low response rate to electronic surveys in other similar studies.^{5,6} Self addressed and stamped return envelopes were included with the surveys.

Participants

West Virginia public high and middle schools, as well as private schools with a minimum enrollment of 50 total students grades 5-12 were included in the study. School enrollment data were obtained through the West Virginia Department of Education website. Three hundred and twelve schools met criteria and were included in the study (119 public

high schools, 156 public middle schools, and 37 private schools).

Survey

The surveys collected general demographic data regarding the school, such as county location, enrollment and grades represented. The presence of a school-based emergency response program and AED was determined. For schools with an AED, the number of devices, length of possession, personnel trained to operate the AED, means of obtaining, reasons for obtaining, and number of times the AED had been used were collected. For schools without AEDs, barriers to obtaining an AED and interest in obtaining a device were determined. Information on any occurrence of sudden death or AED usage occurring on school premises was requested. Schools that reported a death or AED usage were contacted to obtain details.

Results

General Demographics

Of the 312 schools that were sent surveys, 225 (72%) participated representing 54 of the 55 counties in West Virginia. Public middle schools had the highest response rate at 74% (115 of 156), followed by public high schools with 72% (86 of 119) and private middle/high schools with 65% (24 of 37). In total, enrollment in schools that completed a survey accounted for 125,105 students, an average of 556 per school. The majority of surveys were completed by principals, followed by school nurses and other staff. Two hundred and six schools (92%) responded that they had an emergency response plan in place. Emergency response plans were more likely to be in place in public schools than private: 81 public high schools (94%), 107 public middle schools (93%) and 18 private schools (75%).

Schools with AEDs

Of the responding schools, 68% (n=152) had at least one AED, while 32% (n=73) of schools had no AED. Of the schools with an AED, 68% (n=104) had one device, 22% (n=33) had 2 devices, and 10% (n=15) had 3 or more. Public high schools were more likely to have an AED (76%) than public middle schools (62%) and private schools (67%). Forty-two percent of schools had a device for 2-5 years, 26% had an AED for 1 - 2 years, 14% for greater than 5 years, and 13% for less than 1 year. Sixty-nine percent of schools (n=105) obtained their device through donations, including grants and those provided by the county, while 32% (n=48) used school funds. Several schools used a combination of donations and school funds. Fifty of 55 counties in West Virginia reported having an AED in at least one of their schools.

The most common reasons for obtaining an AED were donation (34%), nurse recommendation (30%), faculty recommendation (24%), parental recommendation (5%), doctor recommendation (5%), and previous incident at school (5%). Only 55% of devices were reported to be registered with local EMS. Other schools were unsure if their AED was registered with EMS. School nurses were most likely to be trained in AED usage (n=129, 85%), followed by teachers (n=118, 78%), administrators (n=112, 74%), and coaches (n=96, 63%).

Schools without AEDs

In total, 73 of the 225 (32%) schools returning the survey did not have an AED. Barriers to obtaining an AED included cost (n=60, 82%), lack of trained personnel (n=33, 45%), unfamiliarity with AED (n=16, 22%), liability issues (n=14, 19%), and school board policy (n=1, 1%). Fifty of the 73 schools were interested in obtaining an AED, but did not have plans to do so. Seventeen schools



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Table 1. WV School-based AED Survey Data

	HIGH SCHOOLS		MIDDLE SCHOOLS		PRIVATE SCHOOLS		TOTALS	
	#	%	#	%	#	%	#	%
Schools with AEDs	65	76%	71	62%	16	67%	152	68%
Schools without AEDs	21	24%	44	38%	8	33%	73	32%
Schools with emergency response plan	81	94%	107	93%	18	75%	206	92%
Schools with AEDs, how many?								
One	38	58%	54	76%	12	75%	104	68%
Two	15	23%	15	21%	3	19%	33	22%
Three or more	12	18%	2	3%	1	6%	15	10%
Length of time AED in school								
< 1 year	8	12%	11	15%	1	6%	20	13%
1 - 2 years	15	23%	22	31%	2	12%	39	26%
2 - 5 years	26	40%	28	39%	10	63%	64	42%
> 5 years	12	18%	7	10%	3	19%	22	14%
How was device obtained?								
Grants/donation/county provided	47	72%	43	61%	15	94%	105	69%
Used school funds	19	29%	26	37%	3	19%	48	32%
Why was device obtained?								
Donation	25	38%	14	20%	13	81%	52	34%
Nurse Recommended	20	31%	24	34%	2	12%	46	30%
Staff/Faculty Recommended	17	26%	15	21%	4	25%	36	24%
Doctor Recommended	4	6%	2	3%	1	6%	7	5%
Parental Recommendation	3	5%	3	4%	2	12%	8	5%
Previous Incident at School or another school	5	8%	1	1%	1	6%	7	5%
Is device registered with local EMS?								
Yes	37	57%	36	51%	10	62%	83	55%
No	4	6%	6	8%	1	6%	11	7%
Unsure	18	28%	24	34%	4	25%	46	30%
Who is trained to use AED?								
Schools that have school nurses trained	58	89%	65	92%	6	37%	129	85%
Schools that have teachers trained	49	75%	54	76%	15	94%	118	78%
Schools that have administrators trained	45	69%	52	73%	15	94%	112	74%
Schools that have coaches trained	44	68%	41	58%	11	69%	96	63%
Schools without AEDs, what are barriers?								
Cost	15	71%	37	84%	8	100%	60	82%
Lack of trained personnel	10	48%	18	41%	5	62%	33	45%
Unfamiliar with AED	5	24%	10	23%	1	12%	16	22%
Liability issues	4	19%	9	20%	1	12%	14	19%
School Board Policy	0	0%	1	2%	0	0%	1	1%

were in the process of obtaining an AED. Four schools were not interested in obtaining an AED.

Death Data

Twenty schools (9%) reported a death on school premises of which

the person completing the survey was aware. Twenty-three deaths were reported. The authors have personal knowledge of 2 additional deaths on school grounds that were not reported in the surveys. Of the 25 total deaths, further details

were attainable for 22 of the cases (Table 2). One death was from a shooting and one death was due to head trauma. Of the remaining 20 cases, 6 were students and 14 were non-student adults. Deaths were reported as occurring as

Table 2. Details of deaths occurring in WV schools.

	Students	Adults	Total
Age	12 – 18 years	40 – 60 years	
Death detail	7	15	22
Trauma	1	1	2
Sudden collapse	4	8	12
Congenital heart disease	2	1	3
Seizure history	1	0	1
Electrocution	0	2	2
Unwitnessed	0	4	4
Activity			
Rest	2		
Active/gym class	4		

far back as 30 years ago and as recently as the last year. Victim ages ranged from 12 to 60 years of age. Four of the 6 non-accidental deaths in students occurred during physical activity (gym class or sporting event). Eight adults died following sudden collapse and 2 adults died from electrocution. In light of this information, 14 deaths may have been due to fatal

arrhythmias that could possibly have been treated with prompt defibrillation and use of an AED.

Device Usage

Six schools reported having used their AED once and one school used it on two occasions. One school did not want to discuss details. Four AED uses involved placing pads on conscious persons and were placed as

precautionary measures. Another use was on a victim who had likely died several hours earlier and no shock was advised. One school reported use of an AED on a school staff member who suddenly collapsed. The AED successfully terminated ventricular fibrillation and the person survived. The authors also have personal knowledge of a 17 year old male student who developed ventricular fibrillation during basketball practice that was successfully converted with a school-based AED (Figure 1).

Discussion

Over half of all deaths in young athletes are due to SCA,^{1,7,8,9} with the leading causes due to hypertrophic cardiomyopathy, long QT syndrome, and other congenital heart defects.^{10,11} These deaths are the result of fatal ventricular arrhythmias in which the best chance of survival depends on early CPR and defibrillation.

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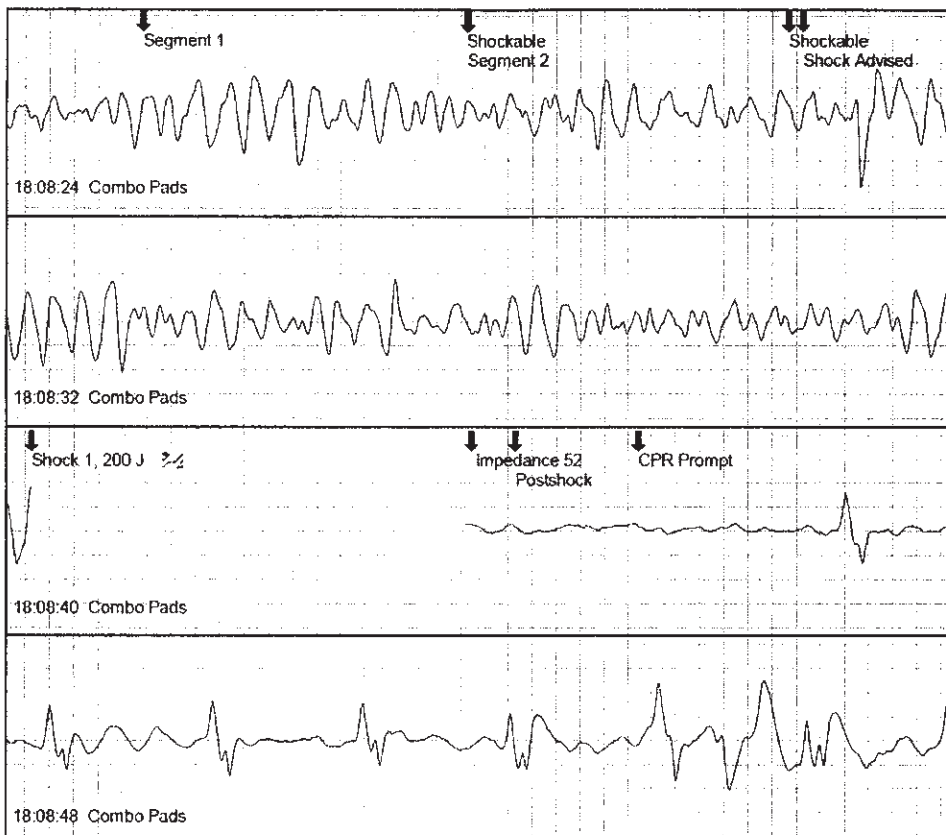
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Figure 1.

AED electrocardiogram of ventricular fibrillation successfully converted to normal sinus rhythm.



The concept of early defibrillation is based on several principles.³ First, ventricular fibrillation is the most frequent initial rhythm in witnessed SCA. Second, the most effective treatment of ventricular fibrillation is electrical defibrillation. Lastly, the probability of successful defibrillation diminishes rapidly over time. Survival from cardiac arrest is strongly dependent on early defibrillation, and the likelihood of surviving a sudden cardiac arrest event decreases by 7-10% for every minute of delay in defibrillation from the onset of cardiac arrest.^{3,12}

Studies have shown the use of public access defibrillation programs in such places as casinos and airports has greatly improved survival of out of hospital SCA.¹³⁻¹⁵ More recently, a large cross-sectional national survey of over 1700 high schools across the country showed improved survival

in high school student athletes and nonstudents who suffer SCA. These schools had Emergency Response Planning and AED access and 23 of 36 SCA victims survived to hospital discharge. Survival was equal for both student athletes and older non-students. The annual incidence of SCA in high school athletes was found to be 4.4/100,000 in this study.¹

The American Heart Association, the American Academy of Pediatrics and other national organizations endorse the recommendations of the public health initiative: The Medical Emergency Response Plan for Schools.^{3,16} These guidelines support and encourage the implementation of lay rescuer AED programs in schools with a documented need. Need is defined by one of the following characteristics:

The frequency of cardiac arrest events is such that there is a

reasonable probability of AED use within 5 years of rescuer training and AED placement. This probability is calculated on the basis of 1 cardiac arrest known to have occurred at the site within the last 5 years, or the probability can be estimated on the basis of population demographics; or

There are children attending school or adults working at the school who are thought to be at high risk for SCA (eg, children with conditions such as congenital heart disease and a history of abnormal heart rhythms, children with long-QT syndrome, children with cardiomyopathy, adults or children who have had heart transplants, adults with a history of heart disease, etc); or

An EMS call-to-shock interval of < 5 minutes *cannot* be reliably achieved with conventional EMS services **and** a collapse-to-shock interval of < 5 minutes *can* be reliably achieved (in > 90% of cases) by training and equipping lay persons to function as first responders by recognizing cardiac arrest, phoning 9-1-1 (or other appropriate emergency response number), starting CPR, and attaching/operating an AED.

Based on these recommendations, it is reasonable to assume that many schools in West Virginia meet at least one of these criteria, especially given the rural nature of the state. In our state, many schools are in mountainous areas that may be difficult to access by emergency medical services in the recommended time.¹⁷ Even in urban settings, such as New York City, a call-to-shock interval of less than 5 minutes is difficult to achieve.¹⁸

With the recent push for AED programs in schools, we report a rise in the number of school based AED programs in West Virginia. The incidence of schools with AEDs in the United States was 32% in 2004.¹⁹ Prior studies have shown that the prevalence of AEDs in Iowa and California high schools in 2001 was 25%,²⁰ 54% in Washington state high schools in 2007,⁵ and 72.5% in

North Carolina high schools in 2009.⁶ This study demonstrated the 2010 prevalence of AEDs in West Virginia public high schools to be 76%.

Of the reported deaths in WV schools, 14 may have been caused by SCA or arrhythmias and may have benefited from early defibrillation. While the main objective of school-based AED programs is to protect young student athletes and students at risk, it has also become apparent that a significant benefit exists for non-students as well. This is evidenced by the successful defibrillation of an adult West Virginian described earlier. Ideally, all West Virginia schools would have access to an AED, but it is equally important for schools to be aware of students and faculty at risk for SCA and for appropriate protocols to be in place to ensure a successful school-based AED program.

While the majority of schools without AEDs cited cost as the main barrier to obtaining a device, our data show that most schools obtained their devices either by donations or grants, and the minority actually used school funds. This was also the case in a study of school-based AEDs in the greater Boston area.²¹ This perceived barrier can be overcome, as there are many options for schools to acquire funds to finance an AED program outside of school funds. The National Center for Early Defibrillation gives an in-depth outline on securing donations from local corporations and industries, civic organizations, private foundations, public charities, government grants and traditional fund-raisers (www.early-defib.org). Perhaps most impressive is the ability of parents struck by the tragedy of a child with sudden death to implement change and policy. Parents have spearheaded changes in state legislature and parental and community programs provide material, information, and funds to aid interested groups in obtaining devices for their schools (i.e. Louis

J. Acompora Memorial Foundation, KEN Heart Foundation, Project ADAM, Project SAVE). A local West Virginia family started the Matt Valez Save a Life Foundation in memory of their son with congenital heart disease who passed away suddenly in gym class. The foundation has raised funds and placed AEDs in schools throughout West Virginia and Ohio. In fact, one of these devices has already saved the life of an Ohio teenager who collapsed suddenly during basketball practice. A similar foundation in Putnam County (the Maura Rae Kuhl AED Foundation) has facilitated the placement of school-based AEDs in that county.

In our state, training the appropriate people to operate an AED was a significant concern in schools without an AED (45%). The American Academy of Pediatrics and American Heart Association established guidelines for developing emergency response protocols for dealing with medical emergencies in school.¹⁶ These guidelines include training staff and students in first aid, cardiopulmonary resuscitation (CPR) and AED training. For those certified in CPR by the American Heart Association, AED training is included. Along with training, these guidelines also state that school AED programs should be coordinated with local EMS services, the device should be appropriately maintained, there should be medical/healthcare provider oversight and there should be ongoing quality improvement. Therefore, schools complying with these guidelines would have at least several people trained in AED use and a medical emergency-response plan to implement a device. This is particularly important for rural states like ours in that a school nurse may be responsible for several schools yet not always be present on a particular campus.

Our data show there is room for improvement of the present school-based AED programs in West Virginia. Only 55% of

schools with AEDs were sure they were registered with local EMS; a requirement in the state of West Virginia. Although most public schools in West Virginia responding to the survey reported having an emergency response plan (94%); only 75% of responding private schools had an emergency plan in place.

Another common perceived barrier to obtaining a device was concerns over liability. All states have "Good Samaritan" laws that protect operators from litigation and, in fact, there is increasing legislature requiring or supporting the presence of AEDs in schools.⁴ To date, the investigators found no cases of successful law suits brought against lay users of AEDs. Several suits have been filed when an AED was not present in a public place and resulted in large verdicts or settlements.²²⁻²⁵ This stresses the importance of a comprehensive and coordinated AED program, not just having the device available. Particularly in states with legislature, the absence of a device may portend more liability than having or using a device.

Conclusion

West Virginia has seen a significant increase in the number of school-based AED programs. While most schools cite funding as a major barrier to obtaining defibrillators, most schools with AEDs obtained them through donations. Death in certain situations can be prevented by timely use of public access defibrillation, and access in schools is becoming the evolving standard. Efforts should be made to ensure this access in all schools, and also to educate likely first responders in CPR and AED use. More education and legislature are needed to ensure that all schools in the state, as well as the country, have readily available access to AEDs in the unfortunate, but not unlikely event of SCA.

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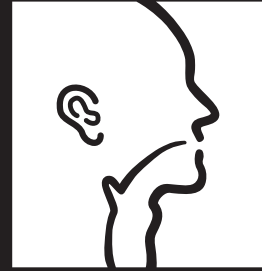
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Hemangioma of the Scrotal Septum: a Rare Entity in Infants with Review of the Literature

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Abstract

Hemangiomas are most common tumors in infancy; however, scrotal septum hemangiomas are very rare with only 45 cases reported in the literature. We report a case of a 6 month old child who presented with a scrotal mass at birth which had increased in size with age.

A scrotal ultrasound with color doppler analysis, revealed a soft tissue mass with diffusely increased blood flow. Scrotal mass excision was performed and the pathology confirmed a capillary hemangioma.

Introduction

Hemangiomas of the scrotum are rare with fewer than 45 cases reported previously in the literature. Due to the clinical similarity with varicoceles, scrotal hemangiomas can be challenging diagnostically as well as therapeutically. Of the cases of scrotal hemangiomas reviewed, hemangioma of the septum has been described only once as a case report in 1956. Ultrasound with color doppler is recommended as a part of the preoperative assessment delineating the extent of a scrotal hemangioma. The condition could be dealt with conservative approach with occasional spontaneous resolution; surgical excision is offered for those with increasing size.

Case history

A 6-month-old child was referred to rule out a varicocele. A scrotal mass was present since birth and

had increased in size with age.

On examination; a 1x2cm mass was situated over the median raphe of the scrotum suggestive of a typical hemangioma

A scrotal ultrasound with color doppler analysis revealed a focal, well circumscribed hypoechoic soft tissue mass along the median raphe with increased blood flow.

Due to increasing in size, surgical excision was performed; the final pathology confirmed the diagnosis of capillary hemangioma.

Discussion

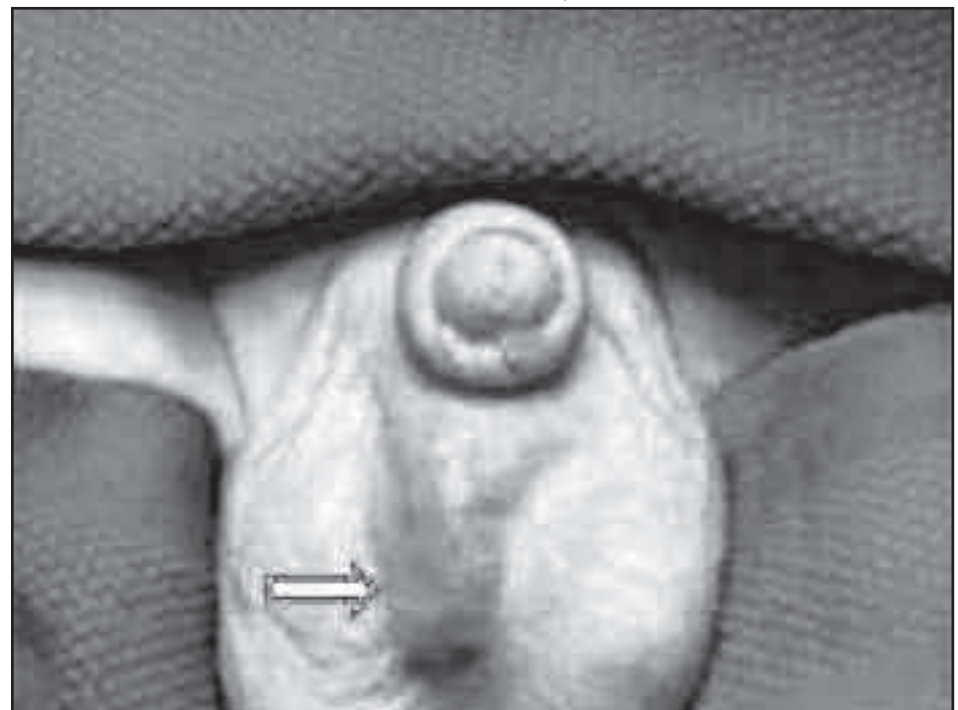
Hemangiomas are the most common benign tumor of infancy occurring in 1-2.6% of all children. In 1937, Gibson classified hemangiomas of the genitalia into two types: cutaneous and subcutaneous.³ Genital hemangiomas are

extremely rare and can be divided into three types: 1) capillary 2) cavernous and 3) histiocytoid.

Capillary and cavernous hemangiomas are usually well-circumscribed, unencapsulated lesions with groups of mature and immature capillary vessels lined by well-defined endothelial cells. Cavernous hemangiomas have large, blood-filled spaces of variable diameter and thickness with areas of infarction and thrombosis. Histiocytoid (epitheloid) hemangiomas have proliferations of large, atypical histiocyte-like endothelial cells almost always accompanied by a mixed inflammatory infiltrate. A history of other hemangiomas, scrotal trauma, or family members with hemangiomas may be elicited in some patients. Genitourinary

Figure 1.

Clinical examination reveals a mass over midline raphe



hemangiomas have been described in Klippel-Trenaunay syndrome (cutaneous port-wine hemangiomas, varicose veins, and ipsilateral soft tissue and bony hypertrophy of the involved extremities).

Scrotal hemangiomas are extremely rare lesions and less than 45 cases have been reported in the literature since the first case was reported by Boullay in 1851.³ Many cases prior to definitive diagnosis may be misinterpreted as other soft tissue masses of the scrotum. Various conditions such as sebaceous cyst, midline epidemoid cyst, angiomyolipoma, varicocele, hematoma, hamartomas of the scrotum could be confused with hemangioma. Patients with scrotal hemangiomas usually present with scrotal enlargement, with or without tenderness. Clinical examination and radiological imaging in the form of ultrasound with doppler are valuable tools used to arrive at a definitive diagnosis. Typically most of the

above mentioned clinical conditions have subtle clinical findings that differentiate them from hemangioma. Diagnosis is confirmed on ultrasound with doppler examination which reveals the vascular component with its flow patterns. It is important to rule out coexisting hemangiomas of the other system. Wide age range has been reported with respect to patients presenting with the scrotal hemangioma ranging from one month to sixth decade of life.^{3,4} These patients are either asymptomatic or may present with sensation of heaviness, dragging pain and occasionally hemorrhage.^{3,5,6} Though wide excision is a treatment of choice various other treatment options such as steroid, fulguration with either carbon dioxide or electrocautery has minimal to zero success.^{3,5,6} Most patients when treated do not mandate long term follow-up as the likely risk of malignant transformation is not reported but may recur from its associated systemic nature.

Conclusion

Scrotal septal hemangiomas are rare, thought it should be considered in the differential diagnosis of all the other midline masses. Diagnosis is confirmed on doppler ultrasound with its characteristic findings. For growing hemangiomas early intervention in the form of surgical excision is valuable and long term follow-up is generally not required.

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Smoking During Pregnancy: A Retrospective Analysis of West Virginia Adolescents

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Introduction

The issue of teen pregnancy is an ongoing national social problem, as is the issue of tobacco use during adolescence. There is clear evidence of negative economic and health outcomes associated with each of these issues.^{1,2} These two social problems warrant significant resources for research and intervention. An area that is equally important is where these two social problems meet, that is the issue of pregnant teenagers smoking during pregnancy. This is one population that especially should be the focus of research and intervention work.

The percent of pregnant teens who report smoking tobacco varies, as do their reasons for smoking during pregnancy. Kaiser and Hays (2005) found that 27% (n = 145) of adolescent pregnant females between the ages of 15 and 18 smoked during pregnancy.³ In another study, 45% of mothers under the age of 20 reported smoking during their pregnancy compared to 15% of mothers who were between the ages of 30 and 44.⁴ One reason that more pregnant teens may smoke compared to adult pregnant women is because of their developmental stage. Peer conformity and acceptance is extremely important to adolescents and those who are pregnant report trying to reduce weight gain during pregnancy to avoid criticism from friends and dating partners.⁵⁻⁶ Additionally,

smoking cigarettes reportedly helps pregnant teens manage daily stress in their lives, particularly when family life is chaotic.⁶ Pregnant adolescents' higher rates of smoking have also been attributed to their concern of delivery pain; authors have found that pregnant teens believe they will experience less pain during the delivery if they smoke cigarettes because their infants will be smaller.⁷ Their hope for a smaller infant does typically come to fruition for these pregnant teens, as smoking has in fact been linked to low birth weight.⁵ It is not surprising then that mothers who had a first pregnancy that resulted in low birth weight are more likely to be recurrent smokers in subsequent pregnancies.⁸⁻⁹

Authors have found that adolescents will decrease their level of smoking during the first trimester but will increase again in the third trimester.⁹⁻¹⁰ One such study reported that 52% of teenage mothers smoked the year prior to their pregnancy. Of these same mothers, 46% of them smoked during their first trimester while 58% of them reported smoking during their third trimester.¹⁰ A second study looked at 310 pregnant adolescents and found that 59% smoked prior to pregnancy. The percent of pregnant adolescents who reported smoking decreased to 51% during the first trimester. However, the rate of pregnant adolescents smoking increased to 62% in the second and third trimesters.⁹

There are numerous predictive factors of adolescent smoking during pregnancy. These risk factors include: race—specifically, Non-Hispanic Caucasian females are more likely to smoke during pregnancy;

socioeconomic status—particularly those living in low-income families and communities, especially rural communities; as well as lower educational attainment.^{3,5,8,10,11-18} Other factors that increase the likelihood of smoking during pregnancy include having a limited support system, as well as having peers or significant others who smoke or concurrently use marijuana or alcohol.^{10,12,15,18-19}

Consequences of smoking during pregnancy include the risk of complications such as placenta previa, and abruptio placenta along with an increased risk for a miscarriage.^{7,16,19-20} Likewise, the negative health outcomes of smoking during pregnancy on fetuses are well documented in the literature. The major risk is that the infant will be born prematurely or with a low birth weight.^{7-8,16,21-23} Fetuses exposed to cigarette smoke in utero are also at a greater risk for being placed in the neo-natal care unit after birth and have higher infant mortality rates from Sudden Infant Death Syndrome (SIDS).^{7-8,11} Finally, long term effects include developmental and intellectual delays, asthma, as well as other medical illnesses such as bronchitis and pneumonia.^{3,7,10,20-22}

Given that West Virginia ranks 45th in the nation for the percent of adolescent smokers ages 12-17,²⁴ this researcher used retrospective statewide data to examine the prevalence of smoking among pregnant teens in West Virginia. The study aim included identifying the demographic and health characteristics of those teens in West Virginia who did report smoking during pregnancy and their infants.

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Methodology

This researcher utilized retrospective data from the West Virginia Birth Score program. The statewide Birth Score program is unique to West Virginia; it was designed to screen newborns for risk of infant death within the first year and provides a mechanism for early referral to services.²⁵ Since 1998, all West Virginia hospitals and facilities that provide birthing services are required by law to participate in the program. The statewide data that is collected is managed at West Virginia University School of Medicine. Answers on the Birth Score screen add up to a total score and those with a “high birth score” (scores over 99) are automatically referred to services, either through Medicaid funded services or private community services. In addition to the Birth Score screen, mothers are asked additional questions during the birth hospitalization when they obtain the Birth Certificate for their child.

The cases from the dataset that were selected included adolescent girls between the ages of 12 and 18 who gave birth in West Virginia between the years of 2003 and 2008. Cases with missing data were excluded from the analysis. Additionally, frequency distributions were examined for each variable. These distributions were used to identify the cases that had extreme values outside of the normal distribution, otherwise known as outliers. An example of this would be a case in which the gestational period for a teen was 45 weeks or her weight gain during pregnancy was 55lbs. Extreme values that are outside the norm of the population have a greater impact on the data analysis and may lead to biased results. One way to prevent this is to delete the cases. The variables included in this study included 1) smoking status, 2) maternal

education level, 3) year infant was born, 4) prior living births, 5) race, 6) trimester teen accessed prenatal care, and 7) birth score. Descriptive and bivariate analyses were conducted.

The University Institutional Review Board approved this study.

Results

There were 6,922 teens who remained in this sample after cases with missing data and outliers were deleted. From this sample, 34.1% ($n = 2,359$) of teens reported smoking during pregnancy. A breakdown of the descriptive and bivariate results by variables is provided below.

Tobacco Use During Pregnancy and Educational Level

Looking within each educational level, a higher percent of pregnant teens with lower educational levels reported tobacco use during pregnancy. Comparing teens across educational levels, 46.5% ($n = 277$) of those with an educational level of Kindergarten through 8th grade reported smoking in pregnancy. This compared to 45.8% ($n = 559$) with a 9th grade educational level, followed by 35.9% ($n = 603$) with a 10th grade educational level. For those with an 11th grade educational level, 27.8% ($n = 425$) reported smoking during pregnancy, followed by 26.8% ($n = 481$) of those with a 12th grade educational level. The lowest percent of teens who reported smoking during pregnancy were those teens with some college or above, with 13.9% ($n = 14$). A Chi-square analysis showed a significant relationship between educational level and smoking during pregnancy ($\chi^2(5) = 205.5, p = .000$). The effect size was .172 for this analysis, which is considered a small effect size according to Cohen (1992).²⁶

Tobacco Use During Pregnancy and Infant Birth Weight

An independent t-test was conducted to determine whether

there was a significant relationship between tobacco use during pregnancy and infant birth weight. The results indicated that those teens who smoked tobacco during pregnancy gave birth to infants with significantly lower birth weights than those who did not smoke during pregnancy ($t(6920) = 11.903, p = .000$). Infants born to teen mothers who smoked weighed on average 3070.39 grams ($SD = 511.20$). This is compared to 3225.97 grams for infants born to those who did not smoke during pregnancy ($SD = 517.58$). Levene’s test for equal variances was not significant ($p = .649$), indicating that the necessary assumption that the two groups (smoking and non-smoking) have approximately equal variance on the dependent variable (infant birth weight) was met.

Tobacco Use During Pregnancy and Prior Births

A small number of teens reported a prior birth ($n = 839$) compared with those who did not have a prior birth ($n = 6,083$). When examining smoking status of these two groups, a larger percent of those who did have a prior birth smoked during pregnancy (45.5%, $n = 382$). This compares to 32.5% ($n = 1,977$) of teens who smoked during pregnancy and did not have a prior birth. A Chi-square analysis showed a significant relationship between prior births and smoking during pregnancy ($\chi^2(1) = 55.72, p = .000$), however the effect size was small (.090) for this analysis.

Tobacco Use During Pregnancy and Infant Birth Score

A higher percentage of infants with a high birth score were born to teen mothers who smoked tobacco during pregnancy. Of the 1,303 mothers who had an infant with a high birth score, 38.6% reported using tobacco during pregnancy. This compares to 29.8% ($n = 1056$)

of the teens who had a infant with a low birth score and reported smoking during pregnancy.

Tobacco Use During Pregnancy and Race

Differences in race were found when examining those teen mothers who smoked tobacco during pregnancy. Of the 6,414 mothers who were Caucasian, 35.1% (n = 2254) smoked during pregnancy. This compares to 20.4% (n = 74) of the African American mothers who smoked during pregnancy.

Tobacco Use During Pregnancy and Infant Year Born

Tobacco use during pregnancy varied depending on the year the infant was born. There was a decline in the percent of teens reporting tobacco use during pregnancy for those who gave birth in 2007 and 2008 (see Table 1 for breakdown by year).

Tobacco Use During Pregnancy and Prenatal Care

In looking at those teens who started prenatal care in the first trimester, 34.2% (n = 1791) reported smoking during pregnancy. This compared to 34.3% (n = 494) who reported smoking during pregnancy and sought prenatal care during the second trimester. For those who started prenatal care in the third trimester, 29.3% (n = 65) reported smoking during pregnancy. Of the small group of teens who did not access prenatal care, 40.9% (n = 9) reported smoking during pregnancy.

Utilization of prenatal care did not vary by smoking status. In both groups 76% accessed prenatal care in the first trimester, 21% sought care in their second trimester, and 3% first began their prenatal care in their third trimester. Less than 1% of both groups did not utilize prenatal care. Those who reported smoking had a similar number of prenatal visits than those who did not smoke (9.58 visits

Table 1. Tobacco Use by Year Infant Born

Year Infant Born	% (n) of Teens Who Smoked During Pregnancy
2003	35.9 (409)
2004	36.2 (375)
2005	34.1 (391)
2006	36.2 (446)
2007	33.1 (414)
2008	29.0 (324)
Overall	34.1 (2359)

compared to 9.83 visits, respectively). While this difference was statistically significant (t=2.820, df = 6920, p = .005), clinically this difference is small (less than one visit in difference).

Limitations

This study did not use a randomly selected sample, but rather the entire sampling frame of teens who gave birth in West Virginia during 2003- 2008. This limits the ability to generalize results beyond West Virginia. Additionally, given the very large sample size (n = 6,922), it is not surprising that all of the Chi-square analyses conducted on these variables resulted in significance levels of $p \leq .01$. According to Cohen (1992²⁶), in Chi-square analysis, effect sizes are small, medium, and large (.10, .30, and .50, respectively). When looking at effect size, however, none of the relationships that were found to be significant had either a medium or large effect size. Consequently, while additional Chi-square analyses were conducted, only the two Chi-square results with the highest effect sizes were reported, which were still very small in terms of strength of relationship. Thus, the majority of the results of this study should be used primarily for descriptive purposes rather than inferential statements.

Discussion

This study examined retrospective data on all those adolescents who gave birth from 2003-2008 in West Virginia, as it relates to tobacco use during pregnancy. Important information regarding the demographic and health characteristics of adolescents in West Virginia who are pregnant and smoking was found. Implications for future research and interventions are discussed below.

Education Level and Tobacco Use

The highest percent of teens reporting tobacco use during pregnancy were those in the earlier grades (8th grade or less), followed by those in 9th and then 10th grade. While the percentages were lower in the final two grades in high school, there was still over one quarter of the teens who reported smoking during pregnancy. It was only for the small group of teens who had some college level education that the percentages were under 15%. This suggests that school nurses, health teachers, and social workers should target their interventions towards younger teens. This can be done on a larger scale, such as in all health classes, as well as for those students who let school staff know that they are pregnant and planning to move forward with the pregnancy. Additionally, as part of sexual education and/or health classes, it would be beneficial to cover the risk factors associated with smoking during pregnancy. While a majority of teens do get pregnant in the last two years of high school, those who are younger are already at a higher risk medically and thus should have education as to the health benefits of not smoking during pregnancy both for themselves and their infants.

Birth Weight and Tobacco Use

The results of this study are consistent with the literature, in

that those who smoke tobacco during pregnancy have babies with significantly lower birth weights. This is a major concern, given that low birth weight has been found to be the primary predictor of infant mortality.²⁵ Also in a recent study using the West Virginia Birth Score data for all women in the state, “the average birth weight of infants born to mothers who smoked was 3039 grams compared to the average birth weight of infants born to mothers who did not smoke of 3289 grams” (p. 18).²⁵ This is similar to the results found in the West Virginia teen population as well. The main issue at hand here is the desire of teen girls to reduce weight gain and manage stress, as well have a less painful delivery. Currently, using tobacco is a way that these teens can effectively achieve these goals. The next step in research would be to examine the knowledge levels of teen girls in regards to the health impact of low-birth weight on infants and its connection to infant mortality. Future research is needed to thoroughly explore how teens negotiate the decision to use tobacco during pregnancy, specifically considering issues such as their fears about delivery, their knowledge levels of alternative delivery strategies to reduce pain during childbirth, their health concerns for their infants, and the influence of whether the pregnancy was desired or not. It is important to note that any provider developing an intervention in this particular area needs to use a developmental approach, given that the cognitive and socio-emotional maturity level of the teen is certainly a factor in their ability to successfully negotiate this decision-making process.

Birth Score and Tobacco Use

It is not surprising that there was a higher percentage of teen mothers who reported smoking

during pregnancy and who also had an infant with a high birth score. Smoking during pregnancy is one of the seven questions on the Birth Score screen and it does add points towards the total score if answered “yes”. While not all seven variables that make up the total birth score were examined in this study, four other variables besides smoking during pregnancy were analyzed, including prior pregnancies, birth weight, maternal education, and maternal age. These four variables all showed higher percents of teens who reported smoking during pregnancy as well, indicating that the birth score screen is a valuable tool for identifying those who may need additional education and resources on tobacco cessation.

In another West Virginia study that used the Birth Score data on women of all ages who gave birth between 2001 and 2009, Mullett and colleagues found that 28.5% of the women had reported using tobacco during pregnancy (2010).²⁵ This is lower than the 34.1% of teens in this study’s sample who reported using tobacco during pregnancy. The results of this study confirm what was found in the larger study of all women. Mullett and colleagues found that women who had an infant with a high birth score were more likely to report tobacco use during pregnancy (53.7%) compared with those women who used tobacco during pregnancy and had an infant with a low birth score (23.6%).²⁵

Year of Birth and Tobacco Use

While over one third of the sample consistently reported using tobacco during pregnancy during 2003-2007, 2008 was the first year that this percentage dropped to 29%. This may be in part due to efforts to increase statewide surveillance of tobacco use as well as to create evidence-based, comprehensive smoking cessation programs since 2007.²⁷

Race and Tobacco Use

Similar to the rest of the country, there was a higher percentage of Caucasian teens who reported smoking during pregnancy, as compared to their African American teen counterparts. Authors have suggested the rates are higher for Caucasian teens because they are more likely to live with someone who smokes, to see a parent or guardian smoke, to have friends who smoke, and lastly, they are less likely to have a smoking ban in their homes than African American teens.²⁸ Given that smoking rates are higher for teens in West Virginia than the rest of the nation, those engaging in research and interventions in this area should consider that tobacco use might be perceived as normative for adolescents and thus involvement by key stakeholders



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such as family members, peers, and teachers is critical.

Prenatal Care and Tobacco Use

An important finding is that prenatal care utilization did not vary between smokers and non-smokers. Using the total number of prenatal care visits and the trimester in which prenatal care was first accessed provides a more complete picture than only using one of these indicators.²⁹ Three-quarters of the teens in both groups accessed prenatal care in their first trimester. The Healthy People 2020 has a target of 77.9% of the population accessing prenatal care in the first trimester, indicating that West Virginia is close to reaching this goal.³⁰ Additionally, the American Congress of Obstetricians and Gynecologists (ACOG) recommend at least nine visits for adequate prenatal care.²⁹ This study's findings indicate that on average both the non-smoking and smoking teens in West Virginia are receiving an adequate number of prenatal visits with just over nine visits for both groups. Given these findings, health providers should have equal opportunities to counsel smoking teens. As mentioned in the introduction, the main obstacle may in fact be less about accessing these teens but rather having an impact in smoking cessation during later trimesters. A limitation with the Birth Score screen at the time of data collection is that the form did not ask specific questions about smoking behavior prior to pregnancy, the amount of smoking during the pregnancy, or about intention to reduce or quit smoking during pregnancy. Consequently, these additional questions remain unanswered. In particular, the question of whether or not there was an increase in reported smoking during the third trimester compared to the first trimester is an important piece of data that

could be useful in comparing our teens with those in other states.

While only a small number of the teen mothers reported no prenatal care, this group still had the highest percentage (nearly 41%) of teens who reported tobacco use during pregnancy. This subpopulation of pregnant teens is a group that needs to be a focus of attention for research and intervention. Determining the primary reasons as to why they are not using prenatal care is key; it may be an access issue due to financial or transportation barriers, or it could be that it is normative within their families to not utilize formal health care services, perhaps because of mistrust of physicians or perceived lack of privacy in their rural communities. A majority of the sample sought prenatal care in either the first or second trimester and had similar rates of using tobacco during pregnancy (just over 33%). It is likely that these teens are receiving health education related to tobacco use during pregnancy and assistance for smoking cessation prior to the third trimester, which is when smoking is most harmful to the fetus.⁵ Authors can focus future efforts on determining the effect of tobacco health education during these prenatal visits and tracking tobacco use over the course of the pregnancy.

Building on What we Know Works

Interventions can target those teens who have not started smoking yet, those who have recently quit and may start again, and those who are actively using tobacco. For those teens who use tobacco and become pregnant, programs that have demonstrated some evidence of success with teens are "multi session smoking prevention programs with peer support" as they help provide the intervention needed for female adolescents transitioning into motherhood at an early age (p.152).⁹ Likewise,

these multi session interventions have been found to reduce smoking initiation among teenagers.⁹ Intervention programs that involve peer resistance, role modeling and booster sessions can be highly successful and these interventions should occur where large populations of adolescents gather such as schools and health care facilities.^{7,9}

Authors have shown that programs that utilize a multidimensional educational framework can be successful in short-term tobacco cessation in adolescents. Ideally programs would result in long-term smoking cessation, however, the critical time period that nicotine interferes with fetal development is during the third trimester. Those who stop smoking by the third trimester have babies with similar health outcomes as compared to babies born to non-smoking mothers.^{9,13-14,22} Programs such as The Teen FreshStart program plus Buddy, which was modified from an existing intervention curricula created by the American Cancer Society, should be considered for replication studies.²¹ Short term cessation by pregnant teens was reported by those participating in this curriculum.

These cessation interventions should be adapted to serve each unique adolescent mother by encouraging participation of the adolescents' parents, being developmentally appropriate and using educational materials that examine the first-hand as well as environmentally harmful effects of smoking on the fetus and infant.⁹ Throughout the intervention, adolescents should receive positive reinforcements for quitting or lowering their cigarette intake. Finally, adolescent peers may also aid in these interventions as they provide real-life experiences for teenagers and can serve as a support system.^{3,7,9,21} A collaboration

of professionals such as social workers, law enforcement, teachers, nurses, physicians, substance abuse counselors and child protective services workers can also be effective in promoting cessation for the health of the teen mother and infant.

Conclusion

This data reveals that tobacco use among pregnant teens is a statewide concern in West Virginia. Important demographic and health characteristics of the West Virginian teens who gave birth during 2003-2008 were presented. Several ideas were discussed for future research and intervention efforts for better understanding the complexities involved for this population as well as how to address this social problem. Moving forward with evidence-based research and interventions to improve tobacco prevention and cessation is in line with the priorities of the Department of Health and

Human Services. According to the Healthy People 2020 plan, there are five objectives that set forth a priority to reduce the prevalence of smoking by adolescents who are pregnant. These objectives include a reduction in: 1) the incidence of infants born low birth weight (LBW) and very low birth weight (VLBW); 2) the incidence of preterm births; 3) the incidence of fetal and infant mortality; 4) the incidence of illness and complications for mothers during pregnancy and delivery; and lastly, 5) increase in the proportion of pregnant women who reach their recommended weight gain during pregnancy.³⁰ While these may be ambitious goals, West Virginia residents deserve to have these objectives identified as a state priority. The state can become a leader in the country by allocating resources to attract researchers, health providers, state legislators, community leaders, and consumers to share

their expertise and work within communities to make these objectives a reality over the next ten years.

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Annual Seminar in Pathology Highly Successful

The Nineteenth Annual Seminar in Pathology, sponsored by United Hospital Center, is highly successful in raising funds for local charities. This year, 225 pathologists attended the annual event. It was held at the Sheraton Statton Square Hotel in Pittsburgh on April 26 thru 29, 2012. Participants came from around the country, including Alaska, California, Michigan, Washington, Texas, Minnesota, Iowa, New York, New Jersey, Wisconsin, Florida, North and South Carolina, Wyoming, Massachusetts, Tennessee, Kentucky, Alabama, Missouri, Colorado, Illinois, Rhode Island, Virginia, Maryland, Pennsylvania, Ohio, Wyoming, Delaware and West Virginia. Some attendees came from Australia, Canada and Quater. The annual seminar was rated by the attendees



as excellent. The purpose for the seminar is to provide continuing medical education for physicians, which is one of the requirements for renewing all state licenses in the U.S.

One participant commented "this conference has proven to be an excellent learning experience. The lectures provide useful information on issues that come

up every day in the practice of general pathology." Some of the proceeds will go to local charities.

This seminar was organized and directed by Chinmay K. Data, MD, PhD, Chief Pathologist at the United Hospital Center. Bruce C. Carter, CEO and President of UHC delivered the introductory speech on April 28, 2012.

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Annual Practice Management Institute (PMI) Conference, San Antonio, Texas



From left to right, Julie Williams, Elizabeth Doran, Melissa Cox, Barbara Good and instructor, Rhonda Granja.



Practice Management Institute has named Barbara Good, Physician Practice Advocate for the West Virginia State Medical Association, its 2011-2012 Outstanding National Liaison. The award was given during an industry-wide ceremony at the PMI Annual Conference for Medical Office

Professionals, held June 13 – 15 at the Crowne Plaza Hotel and Resort in historic downtown San Antonio.

Chosen nationally from among hundreds of PMI hospital, medical society, physician service group and program host partners, Ms. Good has been recognized by PMI for her exceptional networking and relationship-building abilities among her peers throughout the U.S., becoming the years stand-out mentor on the importance of accessibility of education to the physician and staff.

“This award is special in that we spotlight the one client among hundreds who has made an important contribution regarding a particular message – that making education accessible is vital, and can

do much to build bridges between an organization and the physicians they serve.” said Michael Moore, PMI Director of Outreach, Network, and Business Development.

“Barbara Good has by example taken the role of program host to the next level, setting a high bar. She has for example brought the West Virginia State Office Managers Association into the loop as a partner. There is a synergy going on in West Virginia between providers, staff, and the WVSMA through these programs that we are not seeing anywhere else. It’s what other host entities, including other state medical societies, are wanting to emulate.” said Moore.

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Kiser first Schweitzer Fellow from WVU

The Albert Schweitzer Fellowship has selected Jeffrey Kiser, a rising second-year student in the West Virginia University School of Medicine, as one of the Pittsburgh Schweitzer Fellows. Kiser is the first WVU student to be selected as a Schweitzer Fellow.

This year, Kiser will join approximately 240 other Schweitzer Fellows across the country in conceptualizing and carrying out service projects that address the social determinants of health.

Kiser will establish a depression and anxiety prevention program for

international students who attend WVU. His program will focus on building a sense of community among the school's diverse international student population through cultural expression and communication skills development.

Founded in 1997, the Pittsburgh Schweitzer Fellows Program is one of 13 Schweitzer program sites across the U.S. Since the program's inception, Schweitzer Fellows in Pittsburgh, competitively chosen from health-focused graduate student applicants in a variety of fields, have worked tirelessly to address

health disparities and the social determinants of health throughout the greater Pittsburgh area.

Since 1997, more than 200 Schweitzer Fellows have provided more than 44,500 hours of service to Pittsburgh's most vulnerable communities. Partnering with area community-based organizations, these Fellows have addressed a wide variety of unmet health needs by creating and carrying out year-long projects with direct service at their core. For more information visit www.schweitzerfellowship.org/pittsburgh.

New M.S. program preps health professionals to take research from bench to bedside

Along with educating future professionals, producing meaningful research is at the heart of higher learning. Translational research moves science from the lab to the bedside, to the clinic, and ultimately to the public with the goal of improving the health of people in our communities and the nation. The West Virginia Clinical and Translational Science Institute's (WVCTSI) new Master of Science program aims to develop the next generation of clinical and translational scientists through educational and mentored research training.

"This degree program is on the cutting edge of research and graduate education nationally, and it shows our commitment to clinical and translational research here at the WVU Health Sciences Center,"

Fred Minnear, Ph.D., assistant vice president for graduate education and program director for clinical research education, mentoring and career development in the WVCTSI, said.

The M.S. degree combines interest-driven required and elective coursework with thesis research. Research projects are co-mentored and may consist of a clinical trial, the translation of scientific knowledge from the bench to practical application or a combination of both. The degree requires a peer-reviewed publication or a written thesis that is defended orally to a four-member faculty committee.

The clinical research education, mentoring and career development core of WVCTSI was designed to develop the next generation of scientists who will address health disparities in West Virginia. Through

their gained expertise, these clinical and translational researchers will utilize and adapt existing educational infrastructure and make use of the statewide rural health networks that have been developed.

Initial enrollment is limited to faculty, clinicians and health professions students at West Virginia University and the West Virginia School of Osteopathic Medicine. The first CTS students will begin classes in the fall 2012 semester.

To learn more, visit <http://wvctsi.org/pages/Programs/Education-Training/M-S-in-Clinical-Transl-Science>.

To apply to the WVCTSI M.S. in Clinical and Translational Science Program, visit <http://majors.wvu.edu/home/details/229>.

Marshall picks up national award for family medicine

Joan C. Edwards School of Medicine at Marshall University has received a Family Medicine “Top Ten” award from the American Academy of Family Physicians (AAFP) for being one of the nation’s top schools in the percentage of graduates entering family medicine residencies.

Based on a three-year average ending in October 2011, AAFP reports 16.8 percent of Marshall medical school graduates have chosen family medicine residencies. The average places the school as number six in the country.

“Marshall’s school of medicine has consistently found itself in this top ranking because we are committed

to educating students about the importance of primary care and more specifically, family medicine,” said Dr. John Walden, chair of the Department of Family and Community Health. “We have long been aware of the critical nature of educating doctors for rural America and remain steadfast in our efforts to promote this very important specialty.”

Dr. Sarah Chouinard, president of the West Virginia Academy of Family Physicians and a 1998 graduate of Marshall’s medical school, echoed Walden’s assessment.

“Family docs are THE key players in our nation’s ability to reform our health care system. With the

changing business of medicine to include technology and quality-driven outcome measures, we need well-educated, engaged family docs to be present in our communities,” Chouinard said. “Marshall trained me to be a family doctor who understands the value in serving our rural West Virginia communities.”

The awards were presented during a ceremony April 27 at the Society of Teachers of Family Medicine Annual Spring Conference in Seattle. The Top Ten Awards were created more than a decade ago by the AAFP to promote the goal of having more U.S. medical school graduates become family medicine physicians.

Marshall professor shares kidney research in China



Dr. Rankin

A Marshall University professor was in Beijing in May to present his research at BIT’s 5th World Cancer Congress and to meet with colleagues at a leading university.

Dr. Gary O.

Rankin, professor and chairman of the Department of Pharmacology, Physiology and Toxicology at the university’s Joan C. Edwards School of Medicine, spoke about his work to study how a substance found naturally in red wine can reduce some of the harmful effects of a commonly used anti-cancer drug.

According to Rankin’s study conducted in cooperation with

colleague Dr. Monica A. Valentovic, resveratrol, a natural component of red wine, grapes, blueberries and peanuts, can reduce toxicity to the kidney caused by the chemotherapy drug cisplatin. The work is funded by a grant from the National Institutes of Health.

“Dr. Valentovic and I are using a human kidney cell line to look into the protective effects of resveratrol,” said Rankin. “We have found that the compound’s powerful antioxidant properties may be important in helping to protect the kidney from cisplatin’s harmful effects.”

Also at the conference, Rankin helped lead a scientific session, “Cancer rehabilitation, nutrition and management of cancer related complications.”

Before the meeting in Beijing, Rankin visited the School of Biosystems Engineering and Food Science at Zhejiang University in Hangzhou, China, to give a seminar about his work in the field of chemical-induced injury to the kidney.

Rankin was accompanied on the trip by Dr. Yi Charlie Chen, an associate professor of biology at Alderson-Broaddus College in Philippi.

Both Rankin and Chen are lead researchers in the West Virginia IDEa Network of Biomedical Research Excellence—a federally funded program to help build biomedical research expertise across the state. Rankin is the principal investigator of the project and Chen is on the steering committee.

Marshall medical student selected for position with AMA

Alexandra E. Norcott, a rising 4th-year student at Marshall University’s Joan C. Edwards School of Medicine, has been selected to serve a one-year term as a student ambassador

with the American Medical Association (AMA) Foundation.

Norcott will be traveling the country over the next year educating physicians about the goals of the

AMA Foundation and how their charitable gifts can help support free clinics, scholarship grants, and other service-oriented projects.

\$200,000 scholarship endowment largest in WVSOM history

Scholarship formed for WVSOM graduate also honors former patient

When Gary White's daughter Jennifer was 6 months old, he and his wife, JoAnn, took her to a children's hospital in Cincinnati, Ohio. A couple weeks later, the White family received grim news. Jennifer was only expected to live for two years due to a condition doctors most closely related to cerebral palsy.

Jennifer beat the odds stacked against her, continually, until Dec. 16, 2011, when she passed away at the age of 39.

Gary said his daughter's ability to fight the odds was attributed to the exceptional health care Jennifer received throughout her life — particularly the last 10 years she was under the care of William Mullen, D.O., a WVSOM graduate and physician at Logan Regional Medical Center.

"My wife and I had a special needs daughter, and Dr. Mullen gave her exceptional care each year," Gary White said. "I struggled with what you can do for someone like Dr. Mullen. This year, after my daughter's death, my wife said, 'Why don't we fund a scholarship in his name? It can be a memorial to Jennifer but also a thank you for all Dr. Mullen has done for us.'"

The couple, along with the help of friend James "Buck" Harless, did just that.

"I called Mr. Harless and explained the idea to him and he thought it was wonderful," White said.

The Logan natives formed the Dr. William B. Mullen & Jennifer White Scholarship with a \$200,000 endowment. The scholarship endowment is the largest single donation received in the institution's history.

"It's hard to put into words what this endowment will mean for the school," said Dr. Michael Adelman, WVSOM President. "We are grateful to the White family and to Mr. Harless for their generosity. The scholarship honors a WVSOM graduate who had a profound impact on a patient and, by extension, her family. It

demonstrates the highest form of service a physician can provide."

Harless, who has been a long-time supporter of WVSOM and worked with White for nearly 20 years, said there was no hesitation when it came to contributing part of the financial backing for the scholarship.

"Dr. Mullen did such a good job with Jennifer that he almost became a member of her family," he said.

White and Harless agreed that they would like the scholarship recipient to be a student from Logan or Mingo counties. White said he would further hope the scholarship recipient would want to become a physician in either of those counties.

"If we, in some way, helped a local student and continued the osteopathic care that Dr. Mullen has provided to our family by having a graduate of the program come to the Logan or Mingo area, we would be very pleased with that," White said.

Harless said he knows what scholarships like these can do to inspire students to forge a positive path in the future.

"I believe in education strongly," Harless said. "Education is our salvation and I really believe that. I always try to help those who can't

help themselves. It's a joy to me to see someone young be successful and know that my actions may have done something for them."

The White family hopes the WVSOM medical students who are recognized by the scholarship committee will emulate the characteristics and quality traits of Dr. Mullen.

"Dr. Mullen is exceptionally tenacious," White said. "If his patient has a medical problem, he does not rest until he has diagnosed the problem and found out what is necessary to deal with the problem. He's also very compassionate, which is pretty unique. Billy just takes an exceptional personal interest in his patients."

Jennifer White experienced a decade of outstanding care from Dr. Mullen. Even though she was limited in her ability to communicate, her family's appreciation for Dr. Mullen is more than manifested in the generosity of the scholarship which bears his name.

"We feel strongly that this is an appropriate and lasting memorial gift to our daughter," White said. "This is a special gift honoring two special people."



From left to right: Gary White, William Mullen, D.O., James "Buck" Harless, and Michael Adelman, D.O.

CALL FOR PAPERS—2013

Theme: Rural Healthcare Disparities: Challenges & Solutions

WEST VIRGINIA is considered one of the most rural states in the nation according to the U.S. Census Bureau. Our citizens are statistically older, less educated, have lower incomes, and contend with chronic medical conditions more than their national counterparts. In addition to these statistical barriers, access to healthcare is often limited by a scarcity of local providers. This special edition of the *West Virginia Medical Journal* will focus on the challenges these disparities create and will strive to offer solutions for the betterment of healthcare delivery to our citizens.

The *West Virginia Medical Journal* is soliciting articles for this special CME edition to address issues such as:

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Strengthening West Virginia's healthcare infrastructure 2. Special populations (particularly the elderly, children, pregnant women, disabled, handicapped, and mentally ill) specific challenges and solutions to healthcare access 3. Innovative methods to effectively communicate with rural populations 4. The future of small rural practices 5. Chronic illness management in rural populations (particularly diabetes, obesity, kidney and heart disease) 6. Effective recruitment and retention of healthcare providers | <ol style="list-style-type: none"> 7. Use of technology to aid rural healthcare settings 8. Barriers to trauma care and improving access 9. Rural clinic and hospital support and development 10. Current programs designed to reduce barriers to healthcare access (physical, social, educational and/or economic), including an analysis of the cost-benefit and cost-effectiveness of the program(s) 11. Substance abuse — effective tools and resources to aid the rural practice 12. Improving collection and analysis of healthcare workforce data |
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Submissions requirements

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| <ol style="list-style-type: none"> 1) cover letter (include corresponding author's email address) 2) manuscript (double-spaced) 3) short biography <i>for each author</i> 4) three questions and answers pertaining to the manuscript (for CME Post-test Questions) 5) a paragraph stating the objectives of the paper 6) All figures and photos must be submitted separately as black and white or grayscale .jpg, or .tif files. | <ol style="list-style-type: none"> 7) Word count limit is 2,500 with a limit of 5 visuals (i.e., 3 tables and 2 figures). Actual figure and table size is left to the discretion of the managing editor, as space is available. 8) Reference format follows the same style as JAMA. 9) Editorial/commentary submissions are limited to 700 words. <p>Scientific articles should be prepared in accordance with the "Uniform Requirements for Submission of Manuscripts to Biomedical Journals." Please go to www.icmje.org for complete details. For additional requirements, please refer to <i>Manuscript Guidelines</i> at www.wvsma.org/journal.</p> |
|---|---|

For more information or questions about submissions, please contact Angie Lanham, Managing Editor.
angie@wvsma.org / 304.925.0342, ext. 20

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Reviews returned by:	April 1, 2013
Resubmissions:	May 1, 2013
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Congratulations 2012 Certified Medical Office Manager (CMOM) Class!

by Barbara Good, CMC, CMOM
Physician Practice Advocate, WVSMA

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WVSMA to Host Certified Medical Compliance Officer (CMCO) Course

The WVSMA has been chosen to be the first state medical association to host the Certified Medical Compliance Officer (CMCO) course.

The CMCO class, which is currently taught only in webinar format, will be taught in Charleston this fall. In addition, we will have as our instructor Washington D.C. compliance expert Robert W. Liles, JD, MBA, MHA.

The 5 day course, which includes the certification exam, will be taught in September and October at Thomas Memorial Hospital in South Charleston. Please note that registration for this national course will be conducted through Practice Management Institute (PMI), www.pmiMD.com or phone them at 1-800-259-5562.

If you have any questions, please feel free to contact Barbara Good (Barbara@wvsma.org).



Robert W. Liles, JD, MBA, MHA, was the first National Health Care Fraud Coordinator and subsequently worked as Deputy Director of the U.S. Department of Justice, Executive Office for United States Attorneys. As Managing Member in the Washington D.C. based office of Liles Parker, PLLC, Robert heads

one of the nation's leading law firms focused on healthcare fraud defense and regulatory matters representing providers in civil, criminal, and administrative proceedings. Robert's background, education, and experience in the field bring this class to life with a real-world perspective.

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 June 19, 2012:

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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

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Please direct all membership inquiries to: **Mona Thevenin, WVSMA Membership Director at 304.925.0342, ext. 16 or mona@wvsma.org.**

TRANSITION: There is Change in the Air

Disability Insurance

Product Transition: Change of Company Name

In August of 2011, the West Virginia Medical Insurance Agency announced a preferred carrier relationship with Union Central Life Insurance Company which provided a 15% premium discount for members of the West Virginia State Medical Association should they purchase disability insurance through Union Central Life Insurance Company utilizing the West Virginia Medical Insurance Agency.



TO



A change in carriers for this program has recently occurred. In the future disability insurance products written through Union Central Life Insurance Company will transition to being written by Ameritas Life Insurance Corporation (Ameritas Life). Both Union Central and Ameritas are subsidiaries of UNIFI Mutual Holding Company, and are rated A (Excellent) by A.M. Best Company; therefore, the result of this change is only cosmetic for clients of the West Virginia Medical Insurance Agency. The advertisement on the inside back cover introduces the new carrier's name: Ameritas Life Insurance Corporation (Ameritas Life). This visible change is the only change in our program, while the things you value the most remain unchanged:

1. The great team of professionals you work with remain unchanged.

2. The great key competitive coverage features you rely on remain unchanged.
3. The availability of the WVSMA/WVMIA 15% membership premium discount for DI policies remains unchanged.

For questions about this change or questions about the West Virginia Medical Insurance Agency's WVSMA disability insurance product, please contact Steve Brown, agency manager, at 1-800-257-4747 ext 22 (304-925-0342 ext 22).

401K Marketing to Change to All Inclusive Retirement Planning

On Wednesday, March 21st, we were advised by The Hartford that as a result of their decision to "sharpen its focus on the property and casualty, group benefits, and mutual fund business" they will be pursuing sales or other strategic alternatives for Individual Life and Retirement Plans. The Hartford strategy is expected to take 12 to 18 months to implement. During this time the Agency will seek a new partner (carrier) for our preferred carrier retirement plan program.

We were surprised by The Hartford's announcement due to the significant role they had established in 401K business, but believe this will allow us to refine our offering of retirement planning and make it more attractive for WVSMA members.

Our relationship with The Hartford for property and casualty business (businessowners' and workers' compensation insurances) will be strengthened by this announcement, as The Hartford's focus will be more directed towards property and casualty business. In fact, The Hartford currently offers WC and BOP (businessowners policies) products



very specifically designed for medical practices at very competitive pricing.

Should you have questions, please do not hesitate to contact Steve Brown, agency manager, at 1-800-257-4747 ext 22 (304-925-0342 ext 22).



Web-Page Changes

Check us out on the WVMIA web page at www.wvsma.org or go direct to our link at www.wvmia.com.

Although our web-page is new, we hope to be making numerous changes to it as new information is available. Please check us out and give us some feedback on what you want to see. E-mail Steve Brown, agency manager, at steve@wvsma.org.

EPLI Changes

In order to make their EPLI (Employment Practices Liability Insurance) offering more customer friendly, The Hartford has reduced minimum premiums by as much as 75%; created limits availability of up to \$1,000,000 maximum and reduced the number of underwriting questions to quote higher limits.

Do you need EPLI? EPLI is essentially used to protect businesses against lawsuits by employees alleging specific employment related exposures such as sexual harassment, age discrimination, illegal retaliatory treatment of employees, negligent evaluation of employees and employment-related invasions of practice to name some.

For more information, call Steve Brown, agency manager, at 304-925-0342 ext 22 or (1-800-257-4747 ext 22).

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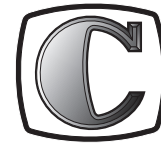
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Obituaries

The WV SMA remembers our esteemed colleagues...

George Hamrick, MD

Retired Charleston ophthalmologist Dr. George Vincent Hamrick died at home on May 24 following a long illness. He was 88. Born in Newburg on April 23, 1924, George grew up in Frostburg, Md., the only child of the late Dr. Martin Elliott Hamrick and Hazel Weaver Hamrick.

He was a graduate of the University of Maryland and University of Maryland School of Medicine, and attended graduate school at the University of Pennsylvania. He served his internship at Mercy Hospital in Pittsburgh, his general residency at Sewickley Hospital in Sewickley, Pa., and his ophthalmology residency at Episcopal Eye, Ear, & Throat Hospital in Washington, D.C. He was a general practitioner in Ambridge, Pa., in the early 1950s; he relocated to Charleston in March 1958, where he practiced ophthalmology until his retirement in December 1988.

He was a member of the American College of Surgeons; WV Academy of Ophthalmology (past president); American Academy of Ophthalmology; WV State Medical Association; Kanawha Medical Society (past president); and the American Medical Association. He was also a member of the Charleston Lions Club and First Presbyterian Church. A lifelong fan of Dixieland jazz, he was a founding member and past president of the Charleston Dixieland Jazz Club.

James Sexton, MD

Dr. James "Jim" Kermit Sexton, 78, of Asheville, died May 30 at John F. Keever Solace Center. A native of Elkhorn City, KY, he was son of the late Kermit and Ruby Owens Sexton.

Always the advocate for education, Jim was a graduate of the University of Kentucky and Bowman Gray School of Medicine at Wake Forest University.

He began his medical career in Dunbar, WV, joining the family practice of Joseph A. Smith, MD. Dr. Sexton later served his residency in radiology at Duke University, before joining the staff of Charleston Area Medical Center where he served a term as Chief of Staff. As an Interventional Radiologist, Dr. Sexton was a partner in Associated Radiologists, Inc. of Charleston, WV.

A wonderful husband, father and patriot, Jim loved his family and his country. For 26 years he was a proud member of the West Virginia Air National Guard, where he loved and enjoyed the camaraderie of the 130th Tactical Airlift Group. Following retirement, the Sextons moved to Asheville, NC in late 1997 so that they could be centrally located to family.

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August
24-26

Featured Speakers

2012-2013 AMA President
details the national
advocacy agenda.



Jeremy A. Lazarus, M.D.
President, American
Medical Association

Chair, National Advisory
Council on Alzheimer's
Research Care and Services



Ronald Petersen, Ph.D., M.D.
Cadieux Director of the Mayo
Alzheimer's Disease Research
Center and the Mayo Clinic
Study of Aging

National healthcare law expert
details the US Supreme Court's
ruling on federal healthcare reform.



Patrick Morrissey, Esq.
Partner, King & Spaulding.
Directly participated in
successfully challenging
federal healthcare reform in
the 11th Circuit.

WEST VIRGINIA
MEDICAL
FOUNDATION

WEST VIRGINIA
State
Medical
Association

Make your lodging reservations today!

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Special Programs and Events

- » Implementing West Virginia's new prescription drug law: a physician's guide
- » Emerging issues impacting physicians and their practice—roundtable discussion with five visiting state medical society presidents
- » Special Risk Management Program hosted by WV Physician Mutual Ins. Co.—Qualify for WV Mutual Insured Risk Management Credit!
- » Meetings and events hosted by more than 10 medical specialty societies and healthcare organizations
- » Installation of 2012-2013 WVSMA Officers at the Friday evening Inaugural Celebration & Gala Dinner

Register online — wvsma.org

Questions? Contact: karie@wvsma.org 304.925.0342, ext. 12

Participating Organizations Include: WV State Medical Association • WV Medical Foundation • WV Medical Insurance Agency • WESPAC • WV State Medical Association Alliance • WVSMA Cancer Committee • WVSMA CME Committee • WV Dermatological Society • WV Medical Group Managers Association • WV Mutual Insurance Co. • WV Chapter American College of Emergency Physicians • WV Orthopaedic Society • WV Radiological Society • WV Association of Orthopaedic Executives • WV State Society of Anesthesiologists • Highmark Blue Cross Blue Shield Provider Advisory Committee • WV Academy of Otolaryngology

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WEST VIRGINIA RESPONDER EMERGENCY DEPLOYMENT INFORMATION SYSTEM REDI



West Virginia Responder Emergency Deployment Information

What is WV REDI?

West Virginia Responder Emergency Deployment Information system

- WV REDI is a web-based registration system developed to facilitate health and medical response through identification of West Virginians willing to serve in public health emergency and non-emergency situations

Who can register?

- Registration is open to West Virginia's health and medical professionals, and others who live or work in West Virginia

How can I help?

- You can help by being willing to assist during a health related emergency or event and by registering in WV REDI

What if I can't go when called?

- Please remember that "volunteer" truly means volunteer. You can choose, at any time, to decline any request that you receive for deployment

How do I register?

- To register go to www.wvredi.org and click on "register now"

Where do I get more information?

- For more information, call **304-558-6900 ext. 2009**

Register today
to be
prepared for
tomorrow!

Visit the
www.wvredi.org
homepage and click on
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