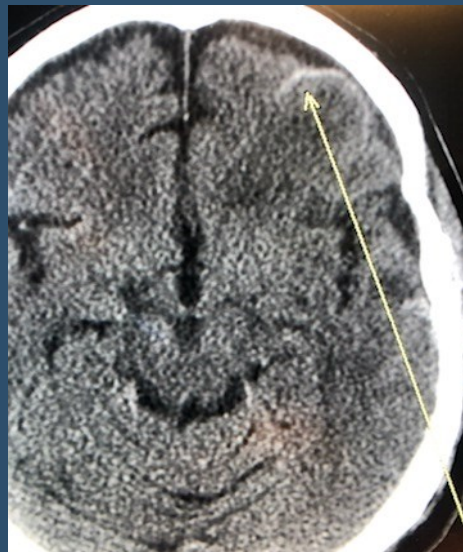


Journal of the

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Subarachnoid Hemorrhage presenting as a headache

In this issue.....

Reasons For Chronicity

Seeing Instability

Ocular and Vestibular-Ocular Aspects in Mild Traumatic Brain Injury

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AAC Lobbyist Corner

Barry Aarons

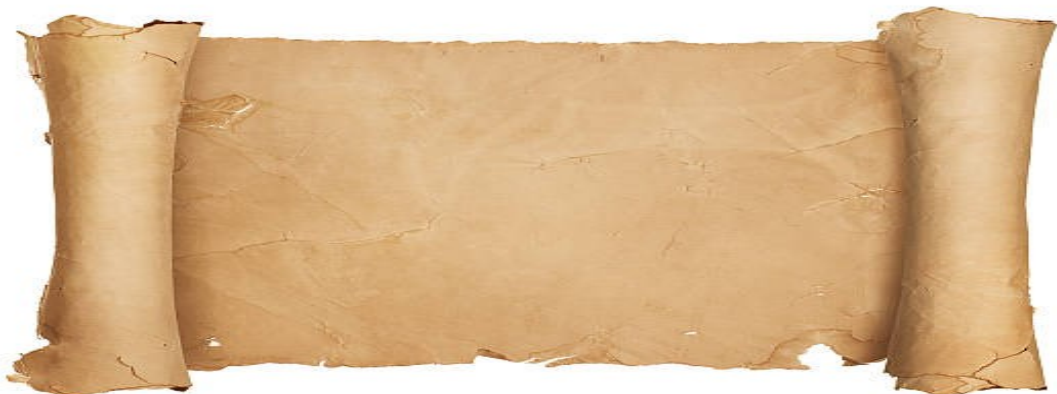
The Jewish Chronicle defines a mensch as a person “ . . . who acts with self-restraint and humility, always sensitive to the feelings and thoughts of others. A mensch is driven by an innate decency, motivated perhaps, by a sense of values to live up to but not out of regard for recognition. A mensch will act as a mensch at times when it may be hard to be one.” Marc Widoff was a mensch – in every sense of the word. From early beginnings in New Jersey through his collegiate days at the University of Oklahoma and in chiropractic college through his illustrious career as a chiropractor in Arizona everything about Marc Widoff veritably screamed– mensch! It is said that there are three things of value in the professional and political world: time treasurer and talent. Marc surely gave of his treasurer and talent. He was always willing to make a political contribution to a candidate or incumbent who had clearly promoted and supported the chiropractic profession. He hosted fund raisers at his home and tirelessly worked the phones to make sure that those fund raisers were successful. But more importantly was his willingness and the joy he gave and received in giving his time to his family and friends. In my own case I will always treasure the moments when I saw his Hummer pull into my parking lot as it foretold hours of conversation with my friend about anything and everything. He was never too busy to share his time with his friends and family. As an aside and to prove the thoughts I remember always being told that he reserved Thursday night for dinner with his daughter. You couldn’t pry him away from the commitment. He gave that time to his daughter. Marc Widoff was a mensch. He left us with fond memories of a life lived well. Paul Anka captured it best in his song, The Times of Your Life:

Good morning, yesterday You wake up and time has slipped away and suddenly it's hard to find the memories you left behind remember, do you remember . . .

The laughter and the tears the shadows of misty yesteryears the good times and the bad you've seen and all the others in between remember, do you remember the times of your life.

Reach back for the joy and the sorrow put them away in your mind the memories are time that you borrow to spend when you get to tomorrow.

Here comes the setting sun the seasons are passing one by one so gather moments while you may collect the dreams you dream today remember, will you remember the times of your life. Marc Widoff was a mensch. I will miss him. We will miss him. And we will always remember the times of his life.



Legislative Update

Gregory Katsaros, DC, DAAPM

The Arizona Legislature adjourned Sine Die the Fifty-fifth Legislature – Second Regular Session on Saturday June 25th, 2022 12:25AM. Two bills directly affecting chiropractic physicians in Arizona were passed.

SB1077—The AHCCCS bill was incorporated within the budget.

“As permanent law, require AHCCCS to cover medically necessary chiropractic services ordered by a primary care physician and submit a report documenting chiropractic service utilization and cost savings by January 21, 2027”

As plainly noted, AHCCCS is now required to cover medically necessary chiropractic services ordered by primary care physician. Some physicians may look at AHCCCS and not give it much thought. However, consider that approximately 1.7 million out of 7 million Arizona residents are on AHCCCS. That is approximately one in four people. Obviously, just as any other health insurance company, it would be your personal choice as to whether or not to choose to become an AHCCCS provider. However, this now allows another 1.7 million people in Arizona to receive chiropractic services which will now be covered by AHCCCS. This takes effect on October 1, 2022. As with nearly every governmental agency where there are changes to rules and laws, there will necessarily be time needed for its full implementation. Considering however that AHCCCS already does cover some aspects of chiropractic care for certain individuals, it would seem that the implementation should not take very long. The Arizona Association of Chiropractic will soon begin making information available regarding AHCCCS for chiropractic physicians. For information about AHCCCS including the various AHCCCS plans, credentialing, current fee schedules and others, please visit:

<https://www.azahcccs.gov/>

This bill has been a few years in the making. The efforts of the AAC lobbyist, Barry Aarons, along with Senator Nancy Barto, and various members of the AAC to push this to completion could not possibly be overstated.

SB1021: Health care liens: limitations

SB1021 Sometimes known as the “Lien Law Bill” was what signed into law. This bill was initially brought forth by Senator Ugenti-Rita. In its initial form, the bill would have not allowed a health care provider to file a lien if it was less than \$20,000, and it would have mandated health care providers to reduce their fees while allowing attorneys to keep their full fee. This was a very contentious bill. When looking at who was for this bill, it was attorneys and insurance companies. Those against the bills were the various health care providers and hospitals. There were many hearings, and resultant of the strong efforts of the Arizona Association of Chiropractic among others, a number of amendments were made to this bill. It was interesting that most people who testified against this bill were chiropractic physicians. There were some lobbyists for the hospitals and the MD’s, but otherwise throughout the hearings, there were no less than 20 testimonies by chiropractic physicians. A number of representatives within the house were steadfast in saying that they wanted to protect the chiropractors. While the bill did pass, it was greatly changed through the efforts of the AAC. Health care providers can now still file liens as before. While there is still a provision that health care providers are required to reduce their bills, it also states that attorneys must also reduce their fees. This was due to an amendment by Representative Jeff Weninger (who was one of the representatives that stated that he wanted to protect the chiropractors):

ARS 33-937 (A) “All interested parties, including the health care provider, patient and patient’s attorney, shall compromise any lien or assignment granted pursuant to section 33-931 and the amounts owed pursuant to any such lien or assignment to provide a settlement of the claim that is fair and equitable to all parties.”

There are also other aspects of this law which all Arizona chiropractic physicians should read. Again, while the bill was passed, this is a greatly watered down law from what was proposed. It is also interesting to note that the senator who put forth the initial bill did not vote for the final bill.

This law will take effect essentially January 1, 2023, meaning that any liens filed after December 31, 2022 will be subject. The law has not yet been uploaded to the Arizona Revised Statutes section of the Arizona State Legislature website, however, the full text of the bill can be found at: <https://www.azleg.gov/legtext/55leg/2R/bills/SB1021H.pdf>

Reasons for Chronicity

James Bogash, DC

As a chiropractor I have a vested interest in my patients not taking drugs of any kind unless absolutely necessary. My more inquisitive patients all seem to ask a similar question...if the body is so brilliantly designed, where do chronic musculoskeletal complaints come from?

Certainly there are injuries that are severe and result in tissue damage that is much greater in degree and have a high likelihood of producing chronic pain. Think skiing, skateboarding or snowboarding injury. High speed car crashes. Motorcycle accidents. Equestrian wipeouts. Surgery.

But what about the weekend warrior who pulls a hamstring? The 8 hour per day computer user? Or me, as a lifelong martial artist, who has had untold injuries over the decades to pretty much every potential area of my body? Why do these situations lead to chronic pain?

My personal thought is that the development of chronicity has much to do with how we handle the immediate period after the injury or onset of symptoms. What do the vast majority of us do (which is, of course, the direction indicated by billions of dollars of advertising) in this immediate period? Rest the area and pop an over-the-counter pain medication or anti-inflammatory. This is arguably the worst possible combination possible. Why?

First, let's address the immobilization aspect. Literally within minutes of immobilization, the soft tissues surrounding the immobilized joint begin to break down. The longer that joint is kept from a full range of motion, the worse the tissue damage. Anyone who's ever broken a bone and had it casted can attest to how much joint motion is lost once the cast comes off. Recovery time can be even longer than the immobilization time.

With tissue injury, ultimately, the size of the region affected is larger than the original injury size. Consider the swelling associated with an ankle sprain—the area of the ligament injury may actually be very small, but the entire ankle, foot and lower leg swells up to the size of a balloon and becomes discolored. Now the amount of injured tissue is much larger than the original injury and this tissue has to heal. But healing occurs in a haphazard fashion if the area is not used. I give the analogy of a leak in your bathroom faucet. You call in the plumber. He shows up with a crew that's been drinking at the bar for half the day. They proceed to rip out half the bathroom to fix the leak and rebuild with a level of skill only a three-sheets-to-the-wind weekend handyman can achieve.

Our body is no different. As we heal after an injury, the new tissue, whether it is bone, muscle, ligaments, fascia or tendons, is laid down in a disorganized manner. Only as that region goes through movement do these healing tissues become stressed and become organized along the lines of force. Immobilization becomes the enemy of proper healing.

Next, let's address the routine use of over the counter anti-inflammatories, or prescription, for that matter. All anti-inflammatory medications are, by their very nature, designed to interfere with the inflammatory process. Unfortunately, inflammation is the normal process of healing. Disrupt this and you disrupt the ability of our tissues to heal the way they were designed. Contrast this with the use of ice right after an injury. Ice works simply by reducing blood flow to the newly injured area, thus keeping the damage of the drunken plumbing crew from getting too out of hand. Arguably a good idea. But then blocking the crew from repairing the area in specific ways, like maybe taking all their crescent wrenches away from them, is going to result in improper repair.

Hopefully you can begin to understand why the combination of immobilization and anti-inflammatory medications immediately after an injury may be the first step in developing chronic pain. Repeat this cycle the next time you injure the area and the dysfunction begins to mount.

In an animal study published as far back as 2006 (*The American Journal of Sports Medicine*, V 34:3, *Indomethacin and Celecoxib Impair Rotator Cuff Tendon-to-Bone Healing*) researchers demonstrate just how bad the outcome can be when non-steroidal anti-inflammatories (NSAIDs) are used after a rotator cuff surgery tendon repair. Researchers looked at the tendon to bone healing that occurred in the presence of NSAIDs and found that every case was affected, from complete failure of healing to weakened tissue. No normal healing tissue was present when compared to the group in which no NSAIDs were used. While this relates to surgical cases in animals, the same process is interfered with in every case of tissue injury that happens in our body when NSAIDs are used.

While this relates to surgical cases in animals, the same process is interfered with in every case of tissue injury that happens in our body when NSAIDs are used.

Dr. Bogash has been in practice since March of 1998, and has been actively involved in educating the community since. He stays current with new research, reading in excess of 120 peer reviewed medical journals per month. Dr. Bogash uses his knowledge of physiology combined with new research to educate patients of the best methods to avoid or manage chronic disease.

Ocular and Vestibular-Ocular Aspects in Mild Traumatic Brain Injury

Gregory Katsaros, DC, DAAPM

ABSTRACT

Mild traumatic brain injury (mTBI) can present with a constellation of symptoms, however, the objective findings on physical exam are less numerous. Most objective findings in mTBI center around the ocular and vestibular systems. An understanding of these systems including their associated reflexes is essential for a more complete diagnosis of mTBI. Demonstrating deficiencies resultant of a mild traumatic brain injury can lead to more individualized treatments and more favorable and efficient outcomes.

TRAUMATIC BRAIN INJURY

Traumatic Brain Injury (TBI) typically occurs secondary to a blow to the head causing insult to the brain. TBI presents in various forms ranging from brief mild alterations of consciousness with minimal short-term symptoms to more severe forms resulting in death. TBI are often classified as either mild, moderate, or severe. A commonly accepted method of categorization is based around the Glasgow Coma Scale (GCS). The GCS is a scoring system based upon functions and responses to eye opening, verbal response, and motor response. This scale for eye opening ranges from 1 to 4, verbal response from 1 to 5, and motor response 1 to 6, with the highest numbers of the ranges being normal. Using this method of categorization, mild traumatic brain injury is scored as a GCS of 13-15, moderate traumatic brain injury with a GCS score of 9-12, and severe brain injury with a score of 8 or less (1). In addition to the GCS score, mild traumatic brain injuries are defined as also having one or more of the following symptoms: less than 30 minutes loss of consciousness; less than 24 hours of post-traumatic amnesia, impaired mental state at the time of accident (confusion, disorientation, etc.); and/or transient neurological deficit (2). It is important to note that loss of consciousness is not necessary for a diagnosis of mTBI.

NEUROIMAGING

Traumatic brain injuries can be broadly divided into two main categories; closed head injuries and penetrating

head injuries. Closed head injuries are much more common and are associated with blunt force trauma, motor vehicle accidents, sporting activities and others. Penetrating head injuries involve actions penetrating the skull such as a gunshot wound or stabbing. Neuroimaging following a closed head traumatic brain injury typically involves computed tomography (CT) and magnetic resonance imaging (MRI) to evaluate for hemorrhage, edema, and vascular injury. While moderate and severe closed head traumatic brain injuries often demonstrate positive radiographic findings, mTBI is most often radiographically negative on standard CT and MRI neuroimaging. However, advanced MRI techniques such as diffusion tensor imaging (DTI-MRI) have demonstrated alterations within the corpus callosum which have shown to be correlative with mild traumatic brain injuries (3). DTI-MRI is a specialized advanced imaging technique which provides for an estimation of the axonal organization within the brain. This is described by fractional anisotropy (FA) which measures directional flow of water along the white matter tracts of the brain (4).

Rutgers, et al demonstrated that patients with mTBI who were investigated less than three months post trauma showed a reduced FA in the genu of the corpus callosum without significant DTI changes in the body and splenium. (3). Low FA has been shown to be associated with worse outcomes after concussion, whereas the higher the FA, the greater the likelihood of having fewer post-concussion symptoms and a better health related quality of life a year after the injury (5).

Mild traumatic brain injury, commonly known as a concussion, is a clinical diagnosis. While there is a constellation of symptoms associated with mTBI (Table 1), the objective findings are more limited. Most objective findings center around the ocular and vestibular systems. Impairment and symptoms related to these systems have been associated with worse outcomes including prolonged recovery (6). As such, a thorough assessment of the ocular and vestibular systems should be performed on anyone who sustained a closed head injury or suspected of having sustained an mTBI.

Headaches	Dizziness	Memory Issues	Nausea/ Emesis	Fogginess of Thought
Visual Disturbances	Photophobia	Concentration Issues	Anxiety/Nervousness	Anger Issues
Emotional Issues	Sleep Disturbances	Irritability	Gait Disturbance	Sluggishness

Table 1. Common symptoms in mild traumatic brain injury

OCULAR SYSTEM ASSESSMENT

Motor activity affecting eye movements, eyelid positions, and the pupils are controlled by cranial nerves III, IV, and VI, and also by higher cortical activities. Disrupted oculomotor activity is commonly seen following an mTBI (7). Evaluation of oculomotor activity is essential in patients who have sustained a closed head injury. Ocular assessment should include evaluation of the alignment, cardinal fields of gaze, smooth pursuit movements, vergence activities, and saccadic activity.

Alignment - Evaluation of the alignment of the eyes should include an inspection for symmetry between the globes and pupils of both eyes, and an inspection of the bilateral upper and lower palpebrae. Binocular fixation and conjugate eye movements should also be assessed.

Cardinal Fields of Gaze – There are 6 extraocular muscles for each eye supplied by 3 cranial nerves which control the eye movements. These cranial nerves include CN III, CN IV, and CN VI. The extraocular muscles with their associated cranial nerves include the superior rectus (CN III), inferior rectus (CN III), lateral rectus (CN VI), medial rectus (CN III), superior oblique (CN IV) and inferior oblique (CN III). Coordination of the various eye movements can be impaired following an mTBI, and these impairments have corresponded to longer post-concussion symptoms (8) (TABLE 2).

Smooth Pursuit - Smooth pursuit eye movement is a low-velocity eye tracking activity used to stabilize the image of a moving object onto the fovea (9). Each cerebral hemisphere is responsible for ipsilateral smooth pursuit eye movements e.g., the right hemisphere detects and tracks images as they move to the right and the left hemisphere detects and tracks images as they move to the left (10). These movements are commonly impaired following an mTBI (11).

Vergence – Vergence movements include both convergence and divergence. Convergence is the act of the eyes moving toward each other, and divergence is where

the eyes move away from each other. Convergence insufficiency is commonly seen in mTBI and is the most common ocular abnormality after sustaining an mTBI (12). 90% of patients who sustained an mTBI have one or more ocular sensorimotor dysfunction. The prevalence of convergence dysfunction ranges from 40% to 42% in mTBI versus 0.5%–5% in the normal population. (13)(14).

Saccadic Dysfunction – Normal saccades are rapid eye movements that shift the center of gaze from one part of the visual field to another. This occurs to orient the gaze toward the object of interest. Saccadic dysfunction can be demonstrated when there is a lack of accuracy or speed of eye movements from target to target. This can be identified when the eyes have difficulty initiating movement or when the eye movements undershoot or trace beyond a target (11).

VESTIBULAR SYSTEM ASSESSMENT

The vestibular system is a complex system of structures and neural pathways which provide for balance, equilibrium, and proprioception. It includes structures such as the semicircular canals, otolith organs, and vestibulocochlear nerve (CN VIII) (15). The vestibular system helps to mediate the vestibular-ocular reflex which helps coordinate eye movements to movements of the head. Assessment of the vestibular system is essential in patients suspected of having sustained a closed head injury as impairment of the vestibular system has been associated with worse outcomes in mTBI (6).

Semicircular Canals (SCC)

The semicircular canals (SCC) are located within the bony labyrinth of the temporal bone on each side of the head. The planes of the three SCC's are approximately parallel to the planes of the extraocular eye muscles and provide sensorineural input related to angular head acceleration. This is processed to coordinate compensatory eye and head movements via the vestibular-ocular reflex. The SCC's are also responsible for facilitating extraocular eye muscle movements on the ipsilateral side and inhibiting extraocular eye muscle movement on the contralateral side (16).

Extraocular Muscle	Movement of Eyeball
Superior Rectus	Elevation; Adduction and Medial Rotation
Inferior Rectus	Depression; Adduction and Lateral Rotation
Medial Rectus	Adduction
Lateral Rectus	Abduction
Superior Oblique	Medial Rotation; Depression, Abduction
Inferior Oblique	Lateral Rotation; Elevation, Abduction

Table 2. Extraocular muscles and associated eye globe movement

Otolith Organs

The otolith organs include the utricle and saccule. Where the SCCs provide sensorineural input related to angular head acceleration, the otolith organs provide sensorineural input related to linear head acceleration. Linear movements of the head in the horizontal plane are recognized by the utricle, while the saccule senses linear movements of the head in the vertical plane. The otolith organs transmit information regarding spinal and leg musculature for balance actions including the ankle, hip, and stepping via the vestibular spinal reflex (VSR), primarily to maintain upright posture during movement. Additionally, they convey information regarding the direction of gravity through head tilt for incorporation into locomotion.

Vestibulocochlear Nerve (CN VIII)

The vestibulocochlear nerve (CN VIII) consists of the vestibular and cochlear nerves. The vestibular nerve is primarily responsible for maintaining body balance and eye movements, while the cochlear nerve is responsible for hearing. The vestibular nerve relays information related to motion and position and facilitates coordinated communication among the semicircular canals, otolith organs, ocular muscles, postural muscles, brainstem, and cerebral cortex. (17) (18).

ASSOCIATED REFLEXES

Reflexes associated with the ocular and vestibular systems should be evaluated in patients suspected to have sustained a closed head injury. These reflexes are vulnerable to disruption in an mTBI, and disruption can result in symptoms such as movement related dizziness, blurry vision, unsteadiness, nausea, and others.

Vestibular-Ocular reflex

The vestibular-ocular reflex (VOR) originates from the semicircle canals to elicit compensatory eye movements that stabilize images on the fovea during brief and rapid head movements. The compensatory eye movements involved in gaze stability ensure clear vision during head movement. The VOR is vulnerable to disruption from an mTBI (19)(20). VOR maintains gaze stability through compensatory eye movements equal to head movements. For example, if the head turns 30 degrees to the right then the eyes should turn 30 degrees to the left at the same speed to maintain stability of an image on the fovea. This compensatory eye movement is referred to as VOR gain. The normal gain is a 1:1 ratio.

Vestibular-Spinal Reflex (VSR)

The vestibular-spinal reflex (VSR) works in concert with other reflexes to help control the positions of the eyes, head and body. It promotes stabilization of head position by innervating the neck muscles and helping with coordinating head and eye movements. The first point of the reflex arc is the irritation of balance. The motor response of the VSR is contraction of the extensors while simultaneously inhibiting the flexors. This helps to provide for an upright and

balanced posture (16).

Vestibular- Colic Reflex (VCR)

The vestibular-colic reflex, VCR acts on the neck muscles to stabilize the head in space during body movements and is considered a righting reflex (21).

Cervico-Ocular Reflex (COR)

The cervico-ocular reflex is an ocular stabilization reflex which is elicited by rotation of the neck. It acts on eye movements, receiving input from the neck proprioceptors. This is of particular importance as a compensatory strategy in bilateral vestibular nerve loss (22).

Cervico-Spinal Reflex (CSR)

The cervico-spinal reflex acts on the extremities to alter limb position in relation to cervical movements. The CSR collaborates with the VSR to influence limb movements on both the ipsilateral and contralateral sides of neck movements. The CSR helps coordinate the positions of the limbs with respect to the trunk, relative to the position of the head to the rest of the body (16).

Cervico-Collic Reflex (CCR)

The cervico-colic reflex works in concert with the VOR. The CCR acts upon deep neck muscles to assist in head stabilization during head and body movements. Body rotation with the head stabilized elicits CCR, whereas head rotation with the body stabilized elicits VOR (23).

SUMMARY

Mild traumatic brain injury is a clinical diagnosis which can present with a multitude of symptoms, but with only a paucity of objective findings. Most objective findings in patients who have sustained an mTBI are demonstrated within the ocular and vestibular systems. It is important to have an understanding of the various aspects of the ocular and vestibular systems as they relate to a mild traumatic brain injury. By properly evaluating the ocular and vestibular systems, including the associated reflexes in patients who have sustained an mTBI, individualized rehabilitation protocols can be developed to more precisely and efficiently address the patient's mTBI related deficiencies.

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About The Author

Gregory Katsaros, DC, DAAPM received his Diplomate in Pain Management from the American Academy of Pain Management and is a member of the American College of Nuclear Medicine and the International Headache Society. He is the owner of Integrative Pain Management in Tempe, Arizona and Co-owner of Aristotle Continuing Education. The focus of his practice is on headaches and mild traumatic brain injuries.

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The Arizona Association of Chiropractic would like to thank all the speakers who presented at the June 2022 Convention at Gila River Casinos & Resorts Wildhorse Pass in Chandler, and the Sponsors who helped make this incredible event such a huge success.

Van Merkle DC— Science Based Nutrition

Bill Gallagher DC—ABCs of Personal Injury

Greg Katsaros DC— Primary and Secondary Headache Disorders
Documentation and Record Keeping

Mike Winberry DC— Introduction to Digital Motion X-Ray

Kevin Wong DC— Mastering the Extremities and Spine the Wong way

Mitch Mally DC— 9 Top Clinical Secrets for a Successful Extremity Practice

Jim Naccarato DC, PhD - The Psychology of Patient Management: Two sides of your “success coin”

Ty Talcott—ASHI

Mark Cymerint— Clinical Evidence Based Practice of Chiropractic: Principles of Practice, Ethics, and Chiropractic Adjustive Technique

Amy Cannatta DC—CA Training

Ian Hoffman— Tax-Free Student Loan Forgiveness for Chiropractors



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**The Arizona Association of Chiropractic is pleased to announce the
Annual Legislator and Member Awards**

Legislator of the Year Award—Representative John Kavanagh

For outstanding contributions in support of chiropractic during the 2022 legislative session

Legislator of the Year Award— Senator Nancy Barto

For outstanding contributions in support of chiropractic during the 2022 legislative session

Lifetime Achievement Award—Presented Posthumously: Mark Widoff, DC

For continued support of the chiropractic community throughout his distinguished career

Lifetime Achievement Award—Presented Posthumously: Daniel Dahl, DC

For continued support of the chiropractic community throughout his distinguished career

Dedication Award—Renee Haberl, DC

For outstanding contributions in support of chiropractic

Above and Beyond Award— Trevor Penny, DC

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Above and Beyond Award—Bill Gallagher, DC

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Above and Beyond Award—Gregory Katsaros, DC, DAAPM

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Recent Dealings with Workers' Comp

James Bogash, DC

A recent incident with my 16 year old son reminded me of why AZ is such a poor market for worker's comp injuries for chiropractors.

For any of you that have been in practice for any length of time here in AZ, you have probably realized one thing: worker's compensation is dried up for DCs.

The reasons for this are both external and internal. Internally, we have probably been out marketed. The large occupational health groups such as Concentra have moved in through efficient marketing. Many places now have Concentra reps giving presentations on how to fill out the worker's comp forms. This is our fault for losing the marketing battle.

The unfortunate part about this is that we have consistently shown to save money and get patients back to work faster across multiple studies. Despite the fact that this is exactly what employers want to hear, this data largely remains a secret.

Back to my son, who smashed his finger in a door while at work for a large department store chain and had to present to a nearby urgent care for evaluation. We were given the Worker's Report of Injury form. Here's the problem.

You know that sheet that says, "Detach and give to the patient?" Yeah—that one.

The receptionist threw it straight in the garbage. I politely informed her that this was REQUIRED to be given to the patient. Her response was that "they" just tell her to through it out.

Yep. Clearly and blatantly illegal and a violation of the WC laws in the state of AZ. Why is this important? Because, this sheet clearly explains, "An employer who is not self-insured can direct you to a doctor of their choice for ONE visit. After the ONE visit, you may report to a doctor of your choice. REMEMBER: If you make a SECOND visit to the employer's doctor, you have established that doctor as your treating doctor. If your employer is self-insured, you may not be allowed to change doctors." (There are some 38 employers in AZ that can direct care for WC: the list can be found here: <https://www.azica.gov/self-insurance-and-tax-office>).

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In Memoriam

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Marc Widoff, DC

See you again old friend. Hopefully not too soon.—*Bill Gallagher, DC*

Marc, Thanks for your friendship and all your guidance. Rest in Peace—*Gregory Katsaros, DC*

Marc, you were a large person in many ways. I remember how dedicated you were to the cause of chiropractic and the destination of our profession. You had real passion. —*Peter Wistort, DC*

Marc, thank you for your dedication to our chiropractic profession. You will be missed. Peace be with your family. —*John Casalino, DC*

Russ Boots, DC



I met Russ when I opened my first clinic as a new graduate. He was the Clinic Director at E.C. and I opened in the same professional center they were in. He immediately came over and introduced himself. I thought I was going to get the 3rd degree. After twenty five years he was a mentor, a teacher and a friend. He

will be missed by everyone that knew him.—*Anthony Bozicevic, D.C.*

Rest in Peace my friend—*Gregory Katsaros, DC*



Michael P. Randall, DC

Dr. Michael P. Randall passed away December 29, 2021, following a brief illness with cholangiocarcinoma. He was a 1988 Magna Cum Laude graduate of Cleveland Chiropractic College, Kansas City, Missouri. Dr.

Randall practiced in the Phoenix area for 15 years. During this time he enjoyed training and mentoring several Doctors of Chiropractic. Dr. Randall and his wife Sheila moved to Dewey, Arizona in 2002. Being semi-retired, he enjoyed a small practice as well as bowling, traveling, visiting with his grandchildren and wood working. He had several of his canes and wood sculptures exhibited in local Galleries. He leaves a rich legacy and will be missed by many—*Sheila Randall*

Mike was a big influence in my practice and in my life. What he passed on to me and so many others is a legacy that will live on. Rest in Peace my friend—*Gregory Katsaros, DC*

Daniel Dahl, DC



Dan passed away after a brief illness on May 16, 2022 in Flagstaff AZ. He was born on February 13, 1948 in Duluth MN. He was a graduate of Duluth Central High School where he lettered in football and track. He attended College in Fort Collins, CO and graduated from Palmer Chiropractic College in Davenport IA, as did his brother Ron. He served his community as a DC for 49 years,

even working Saturday mornings for his extended family of patients.

Dan understood the necessity for unity within the chiropractic profession. He was lifelong member of the Arizona Association of Chiropractic and continuously helped our friends in the legislature with their re-elections. He volunteered to serve his country during the Vietnam War and served in the US Navy aboard the USS El Dorado. As a chiropractor, he was admired for helping many of his VA patients for the past several years. He is survived by his loving wife of 42 years, Christine Dahl and many other family members.



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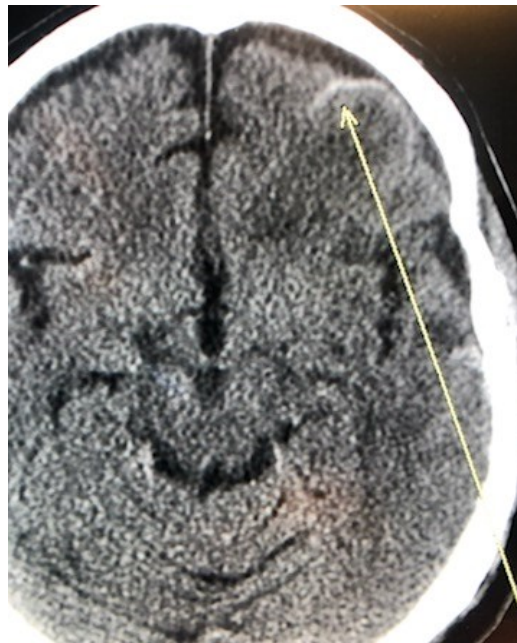


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Radiology Case-Brief Report

Subarachnoid Hemorrhage Presenting as a Thunderclap Headache

Gregory Katsaros, DC, DAAPM



A 52 year old male presented with complaints of a severe headache noted about the left frontal-parietal region along with vomiting. He had no significant history of previous headaches. He denied any recent direct or related head trauma. He had a history of hypertension and was taking antihypertensive medications. An emergency CT scan of his brain demonstrated a subarachnoid hemorrhage.

The type of headache he presented with is described as a thunderclap headache. A thunderclap headache is a sudden severe form of headache that occurs abruptly, peaks within 1 minute of onset, and typically fades over the next few hours. It is so termed as its explosive nature is similar to a clap of thunder. Thunderclap headaches are most often attributed to significant intracranial vascular disorders such as subarachnoid hemorrhage.

A Subarachnoid Hemorrhage (SAH) refers to the extravasation of blood into the subarachnoid space between the arachnoid and pia mater. These most commonly occur secondary to head trauma or a ruptured cerebral aneurysm. Risk factors for a ruptured cerebral aneurysm include hypertension, known history of cerebral aneurysm, family history and others. While SAH are often spontaneous and can occur while sleeping, a severe headache during strenuous activity which does not resolve soon after ceasing the activity should raise suspicion, particularly if the person does not have a history of headaches or prior headaches following similar strenuous activities.

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For info, please visit www.backhealthaz.com or contact irene@backhealthaz.com.

The logo for Back Health & Inner Radiance Wellness features a stylized lotus flower with five petals in shades of orange, yellow, and green. Below the lotus, the text 'Back Health & Inner Radiance' is written in a small, black, sans-serif font, and 'Wellness' is written in a larger, black, cursive font. The entire logo is enclosed in a white rectangular box with a thin black border.

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