

The AAO

FORUM FOR OSTEOPATHIC THOUGHT

JOURNAL

Official Publication of the American Academy of Osteopathy

TRADITION SHAPES THE FUTURE

VOLUME 21 NUMBER 3 SEPTEMBER 2011



**Osteopathic treatment of children with scarlet fever
in the nineteenth and twentieth centuries... page 16**

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Letters to the Editor

Dear Editor,

I just read the article, “Osteopathic Approach to the Patient with Chronic Fatigue Syndrome” by Anne Chong, MS, and Murray R. Berkowitz, DO, MA, MS, MPH. They did a nice job discussing CFS, but their case study may not fit the criteria. With a positive RF, ANA and SED rate, the patient deserved a more complete rheumatological workup. She definitely required an x-ray exam of her hands to look for MCP erosions, and, with the ANA titers given, probably needed screening for Lupus, Sjogrens and myositis syndrome, as well as at least a look at her anti-thyroid and anti-thyroglobulin antibodies, TSH and T3 to evaluate for Hashimotos. All are among the medical differentials that should be eliminated before concluding she does not have an auto-immune disease rather than CFS. Actually, I was surprised, given the level of documentation and discussion about CFS, that they had apparently overlooked the rheumatological findings. More and more, I find these nonspecific rheumatological lab results, and all I have been able to come up with in the rheumatology literature is Polymyalgia Rheumatica, which presents a lot like CFS. In two of my recent cases (both patients over the age of 60), I have even seen muscle atrophy, particularly in the limbs, and severely disabling weakness that only responds to steroids. Anyway, again, their discussion was great.

—Richard Van Buskirk, DO, PhD, FAAO

Authors' Response

We thank Dr. Van Buskirk for his letter and the comments. Thanks for taking the time to write and pointing out the need for a more complete evaluation, especially given the fact that this patient's ANA and SED rate were elevated. Actually, the patient's imaging was negative. Anti-CCP, Smith Antigen, Double-Stranded DNA, T3, T3 Uptake, T4 and TSH were all well within normal ranges/negative as well. These were omitted for brevity in the table; however, Dr. Van Buskirk's letter points out that the case report (as written) makes it look as if we may not have done enough evaluation to rule out the disorders he mentioned. By having done these tests and ruling out these disorders, the CFS (as a diagnosis of exclusion) remains. That said, he is right, and we failed to explicitly mention these in the body of the article. We again wish to thank Dr. Van Buskirk for allowing us to extend the learning opportunity and make sure everyone else knows that one needs to be thorough in evaluating these patients.

—Anne Chong, MS; Murray R. Berkowitz, DO, MA, MS, MPH

Dear Editor,

In the March *AAOJ*, Dr. Murray Berkowitz raised two issues in his editorial, “Osteopathic Scholarship, Research and Publication” that I found intriguing.

The first issue was that we should have another publication for musculoskeletal topics. My first response was identical to that of Dr. Berkowitz: “. . .that is the role of the *AAOJ*.” Then, as I read on, I began to agree with his idea that we need more publishing space or, in today's parlance, “bandwidth.” Then, an easy solution came to me. “Why add a new publication when it would be far easier to simply increase the page count of the *AAOJ* or increase the publication frequency of the *AAOJ*?” Since the *AAOJ* is distributed in an electronic format for most members, the cost of more pages or more issues is small. The workload would increase, but that would be true for any format or medium. It would also be true whether expanding an existing periodical or publishing a new one.

Is it necessary to change the name of the *AAOJ*? Would a name change attract more readers and contributors? Who are these additional readers and contributors? Are they even osteopathic physicians? Does the AAO want to expand its audience outside of the profession? Ultimately, answer all these questions carefully and thoughtfully, and the path will become obvious!

The other issue that Dr. Berkowitz raised was the idea that we need more research to support osteopathic practices. I have long shared that opinion. But after more than 35 years in the profession and seeing the research done by Korr, Hix, Denslow and many others since they have little impact on the visibility and acceptance of the profession, I now wonder if more research is going to have any significant impact. This is obviously a heretical question! But much of that research

has had little impact on the osteopathic profession, and its own students witness the infrequent and scattered use of OMT within the profession.

A colleague once raised the issue that, if evidence-based medicine is the “holy grail” and we should all follow it, why is cranial osteopathy NOT the norm for treating children with otitis media? After all the research by Mills and colleagues showed it was the most effective long-term treatment strategy, the profession showed no change of attitude or behavior based on the evidence.

Actually, I am not sure what the right strategy is regarding the profession’s research efforts, but I am not impressed with the outcomes to date. Perhaps, as Dr Berkowitz suggested, getting more cases and clinical experiences published is the place to start.

—Robert C. Clark, DO

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Eating our seed corn, again!

Murray R. Berkowitz, DO, MA, MS, MPH

As I write this editorial, it is both a time for joy and sadness for me professionally. This is my last editorial as Associate Editor and my first as Editor-in-Chief. I take great joy in our esteemed colleague, Raymond J. Hrubby, DO, FAAO, moving up to become the new Communications Director for the Academy. Ray, congratulations and thanks, as always, for the great work you do and have done—for the *Journal*, for the Academy, and for the profession. I am pleased and proud to know you, to have had the opportunity to work with you on the *Journal*, to be counted among your many friends and to have been mentored by you. I am honored to “move up” to assume the duties and responsibilities of the position vacated by you, but, Ray, no one can ever replace you.

I am very devoted to our Academy and look forward to contributing to its future and its growth, as well as that of the osteopathic profession worldwide. I strongly feel that the *American Academy of Osteopathy Journal* plays a central role in accomplishing these goals. I know I can work very well in pursuit of these goals regarding the *AAOJ*. I also recognize the very large shoes that I will have to fill in my efforts to follow in the footsteps of our previous editors—most recently Drs. Hrubby, Clark and Chila. I look forward to serving our Academy in this capacity.

I intend to devote this issue’s editorial to the consideration of funding of United States Osteopathic Graduate Medical Education (OGME) programs. As many of you are aware, the Centers for Medicare and Medicaid Services (CMS) announced in early August the results of the resident redistribution pool per the rule published in the November 24, 2010, Federal Register. As a result of this action, 267 teaching hospitals will see their residency slots reduced per Section 5503 of the Affordable Care Act. The American Association of Colleges of Osteopathic Medicine is closely following these developments.

As many of you are also aware, the Balanced Budget Act (BBA) of 1997 constrains the opening of new programs

at healthcare facilities that have not previously had any GME/OGME. It further limits the number of resident slots that will be funded by CMS to the number in existence at those institutions that had residency training programs when the BBA was implemented. For those institutions, mostly hospitals, this is a zero-sum game. This means that if any hospital, such as Memorial Hospital in York, PA, or Cook County Medical Center in Chicago, IL, wants to increase its number of internal medicine residents (by six, for example) that can only be done if the same number of residents in other programs (e.g., four in general surgery and two in family practice) is decreased. These institutions had residency programs at the time the BBA was enacted.

On the other hand, if a hospital that never had any residency programs desires to implement a program, then that institution is not constrained by the BBA and can plan for any number of programs and residents the institution can support to meet accreditation standards in those specialties. The problem here is that there is a funding gap caused by the time lag between the time a program begins and the time CMS will fund the program. This is typically three years. Another problem in beginning programs is that the number of residents in place when CMS begins funding then constrains the number of residents in the institution. Still, a further problem is that not all specialties are funded under CMS, e.g., none of the preventive medicine, public health, occupational medicine, etc., residencies are funded by CMS.

Our residencies in Neuromusculoskeletal Medicine and Osteopathic Manipulative Medicine (NMM/OMM) cannot be attended by active duty military personnel, since these programs are not open to both MDs and DOs. The situation is the same regardless of whether it is a two-year “full” NMM/OMM residency or a one-year “plus-one” program. A number of my students have thought about attending NMM/OMM residencies, but are forced into making a choice between selecting another specialty, and perhaps later, after completing their minimum military obligation, attending a “plus-one” program as a civilian

or, alternatively, delaying entry into any residency until after completing their minimum military obligation and then entering one of the two-year NMM/OMM residencies as a civilian. For the latter, there really is no opportunity to return to military service other than as a “general medical officer,” a “residency-trained flight surgeon” or an “undersea medical officer.” The need for such “operational medicine” physicians is great while in the lower ranks, but the opportunities in the higher grades/ranks are much more limited. By the time our military scholars and physicians complete their military obligations or career of service, very few are in a financial position to consider returning to the salaries offered to civilian residents.

The need for NMM/OMM residency-trained, board-eligible/board-certified physicians as full-time faculty in our osteopathic medical schools is, without question, great. At this time, about one-half of all osteopathic medical school campuses nationwide have open, fully-funded, full-time faculty positions available. We must have these faculty to staff our schools and Osteopathic Postdoctoral Teaching Institutes, and yet, the number of resident slots is limited and funding these positions is extremely difficult. Obtaining funding from other sources (e.g., the military) is not possible due to their policies, as well as those of our profession.

Another way in which we limit opportunities is by the deans of the various osteopathic medical schools agreeing that they will not engage in a “bidding war” to obtain faculty. If salaries of new faculty were to increase, then the salaries of current faculty would also have to increase in a mathematical step-function to avoid salary compression. Now, whether by design or by “unintended consequence,” I do not know and will not even venture a guess, but the effect of this is that NMM/OMM faculty salaries are low due to lack of competition. The salaries offered to newly graduating residents are much lower than in other sectors, so we lose potential new faculty. Unchecked, we then lose the opportunity to continue the osteopathic education process.

For the osteopathic medical profession to survive, we, as a profession, must bring young, enthusiastic faculty into our schools. We must fund their residency training. We must provide the necessary financial and remuneration incentives for new DOs to see that academic OMM is a viable career choice. Our leaders, deans and organizational/institutional executives, appear to be making funding and financial decisions and implementing policies that negatively impact this critical and unique component of osteopathic medical education. We are being pennywise and dollar foolish. We truly are “eating our seed corn,” again!

Sutherland Cranial Teaching Foundation



**SCTF will be making its
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Paul R. Rennie, DO, FAAO
Touro University Nevada College of Osteopathic Medicine
Department of Osteopathic Manipulative Medicine
874 American Pacific Drive, Henderson, NV 89014
(702) 777-1813
paul.rennie@tun.touro.edu

Application Closing Date: Open until filled.

2011-2012 AAO Calendar of Events

Mark your calendar for these upcoming Academy meetings and educational courses.

- September 14** Postdoctoral Standards & Evaluation Committee teleconference, 7:30 pm EST
- September 20** Osteopathic Medical Economics Committee teleconference, 8:30 pm EST
- September 23-25** *Seated Facet Release: Techniques of the Still Family* Karen M. Steele, DO, FAAO—
The Cavalier Hotel, Virginia Beach, VA
- October 7-9** *Prolotherapy Weekend*—Mark S. Cantieri, DO, FAAO, and George J. Pasquarello, DO, FAAO—
UNECOM, Biddeford, ME
- October 30** AAO Board of Trustees meeting—Orlando, FL
- October 30** *Progressive Inhibitions of Neuromusculoskeletal Structures (Pre-OMED)*
Dennis J. Dowling, DO, FAAO—Orlando, FL
- Oct. 31- Nov. 2** *AAO Program at OMED*—Kendi L. Hensel, DO, PhD, Program Chair—Orlando, FL
- October 31** Postdoctoral Standards & Evaluation Committee meeting, 6:30 am EST—Orlando, FL
- October 31** Fellowship Committee meeting, 12:00 pm EST—Orlando, FL
- November 1** Awards Committee meeting, 6:30 am EST—Orlando, FL
- November 1** LBOR Committee meeting, 6:30 am EST—Orlando, FL
- November 1** Education Committee meeting, 12:00 pm EST—Orlando, FL
- November 1** Publications Committee meeting, 12:00 pm EST—Orlando, FL
- December 2** AOBNMM item writing and board meeting—Wyndham Hotel, Indianapolis, IN
- December 3** AOBNMM oral and practical examinations—Wyndham Hotel, Indianapolis, IN
- December 4** AOBNMM written examination—Wyndham Hotel, Indianapolis, IN
- December 9-11** *Visceral Approach to the Sacrum and Pelvis*—Kenneth J. Lossing, DO—COMP, Pomona, CA
- January 13-15** *Still-Littlejohn Techniques*—Christian Fossum, DO (Norway), and
Richard VanBuskirk, DO, PhD, FAAO—AZCOM, Glendale, AZ
- January 20-21** Education Committee Meeting—University Place Conference Center & Hotel, Indianapolis, IN
- February 2** Membership Committee teleconference, 8:30 pm EST
- March 19-20** *Pediatric Sports Medicine: The Young Athlete (Pre-Convocation)*—Jane E. Carreiro, DO, and
Gregg C. Lund, DO—The Galt House Hotel, Louisville, KY
- March 19-20** *The Legacy of Stanley Schiowitz, DO, FAAO: Facilitated Positional Release and Beyond*
(Pre-Convocation)—Dennis J. Dowling, DO, FAAO—The Galt House Hotel, Louisville, KY
- March 21** AOBNMM re-certification examination—The Galt House Hotel, Louisville, KY
- March 21-25** *The 75th Anniversary Convocation: The Unified Osteopathic Field Theory*—Kenneth J. Lossing, DO,
Program Chair—The Galt House Hotel, Louisville, KY
- March 22** Annual Business Meeting and Elections—The Galt House Hotel, Louisville, KY

Book Review— *The Feminine Touch: Women in Osteopathic Medicine* by Thomas A. Quinn, DO

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Rebecca Giusti, DO

Thomas Quinn has written a truly remarkable book. He delves into the importance of women in the osteopathic profession in purely eloquent and concise language. While I feel that every osteopathic physician, and any female applicant to an osteopathic medical school, should read this book, it is applicable to anyone who wants a complete education in all aspects of Osteopathy.

For those who have questions about the scarcity of osteopathic hospitals compared to allopathic ones, the infamous California merger and its subsequent reversal, and the presence of DOs in the armed forces, this is the book for you. For those who desire a crash course on the history of osteopathic medicine, A.T. Still, and the formation of medical education in this country, again, this is the book for you!

The reader is treated to delightfully readable accounts of notable female osteopathic physicians, from the beginning of the profession to the present day. Dr. Quinn demonstrates how the evolution of the osteopathic profession and women became intertwined and inseparable as Dr. Still welcomed them to the profession from the start. Whether the reader is male or female, he or she cannot help but admire the tenacity and strength of these women, and the profession itself, and to be inspired by all they have accomplished in the name of Osteopathy and humankind.

The many pictures and quotes—some from A.T. Still himself—that Dr. Quinn has chosen for this book bring his words to life. The glossary makes it complete and user-friendly for all readers. The book itself truly embodies the spirit of the team approach prevalent in all aspects of medicine. Dr. Quinn recognizes not only female osteopathic physicians and researchers, but also osteopathic nurses and other influential women, such as patients, supporters and other healthcare professionals who enabled the profession to survive and flourish.

As a woman, an assistant professor at an osteopathic medical school and an osteopathic physician, I greatly appreciated this book. It intensified my pride in being part of such a dedicated and noble profession, and in being a female osteopathic physician. As physicians, it is easy to get wrapped up in our lives at present—seeing our patients, performing administrative duties and caring for our families. But reading these pages drew me out of my world and allowed me to wonder at and contemplate the achievements of those who have gone before me and my contemporaries. All of these people are inspiring and renewed my desire to be the best osteopathic physician I can be.

I wish I could have read something of this nature prior to applying to osteopathic medical school, as I feel it would have made my knowledge and respect for this profession even deeper. It was a quick read—important for all of us busy physicians—but it gave me greater insight into the profession, the evolution of medical education and the contributions of members of my gender. I am grateful to Dr. Quinn for providing such a well-organized, well-researched gem, and I will definitely recommend this book to our osteopathic medical school applicants, as well as currently enrolled students.

Accepted for publication: May 2011

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Harold A. Blood, DO, FAAO, Memorial Lecture: *100 Years of Osteopathic Leadership*

Jerry L. Dickey, DO, FAAO

My first trip to the Broadmoor, I had the opportunity to shake Dr. Blood's hand. I was in awe of him and his generation (my father's generation). Before I get started, I want to add a disclaimer to absolve the American Osteopathic Association (AOA) and the American Academy of Osteopathy of anything I say. Having said that, I am now free to be me!

The title of the lecture should be "100 Years of Osteopathic Leadership." I am going to use my own family as an example of what I am talking about. I am a third-generation osteopathic physician, and this year is quite significant because, in 1911, my father's cousin Otis entered the American School of Osteopathy. The year 2011 marks the 100th year of the continuous, uninterrupted involvement of my family in the osteopathic profession.

Having grown up in this profession, it is almost in my DNA. Having been treated from day one and, all through my life, having been cared for by no one except osteopathic physicians, I don't have any other perspective. I recognize that most students represent first-generation osteopathic physicians-to-be. I want to use the memories of my family as a template to show that each generation has faced challenges that were unique, and in most cases, if not properly handled, could have proved fatal to the continued existence of the osteopathic profession.

A little preliminary history is necessary. In the 1890s, when Dr. Still first started graduating his students, the curriculum was two years long. The first class started in 1892 and graduated in 1894. Those who went out of state often found themselves being arrested and charged with practicing medicine without a license. Dr. Still was a very shrewd strategist and politician. He got a group of very articulate young DOs, he called them his "flying corps," and they would get on a train and go to whatever city or state, and testify as *amicus curiae* (friends of the court) and argue that the defendant was practicing osteopathy, they were not practicing medicine.

Dr. Still had no use for the crude drugs of the day, and they argued that this was a different school of practice—it was drugless, it wasn't medicine, and usually the charges were dropped or the practitioner was acquitted for lack of evidence. This set the stage for enacting practice laws.

These practice laws usually explicitly stated that this was a drugless form of therapy, which Dr. Still was very happy to accept.

The second point is that, in 1908, the Carnegie Foundation became quite concerned about the deplorable state of medical education in the United States. It decided to canvas all of America's medical schools and hired an eminent educator, Abraham Flexner, to visit as many medical schools as would admit him and use a yard stick of his choice to judge the quality of these medical schools. Dr. Flexner chose as his yard stick an institution which started in 1892, the same year Dr. Still started his school. This school had an innovative curriculum. The name of that school was Johns Hopkins University in Baltimore.

The new curriculum model was based on the fact that entering students must have two years of undergraduate college education, which later changed to three years. The school was to be not-for-profit—he felt making money on medical schools led to less quality education and inferior or insufficient faculty. Dr. Flexner felt that medical schools should not be in the business of making money. This was the first precept of Flexner's yard stick. Number two was that the basic sciences were to be taught by PhDs, each in their own subject. The third part was that clinical sciences were to be taught in the clinical environment, at the bedside. So, you had a not-for-profit, with basic sciences, a four-year curriculum, clinical sciences taught at the bedside, and you had one year of postgraduate training in the hospital or an internship.

This is the yardstick Abraham Flexner used to go around the country. Dr. Still was happy to open up the school, and, like 80 to 90 percent of the schools that were surveyed, Flexner gave our school scathing denunciations. First of all, our graduates could come right out of high school right up to the beginning of World War II. No college was required. Secondly, the curriculum was only two years long. There were no hospitals, so therefore there was no hospital training. Not having hospitals, there were no internships or residencies.

Implementation of the Flexner Commission Report and Guidelines was slow to get started. The report was delivered to the Carnegie Foundation in 1910, but little

implementation had occurred by 1914. We were more concerned about what was happening in Europe, with the growing storm clouds that lead to World War I and our isolationist tendencies. The public was diverted and couldn't have cared less about medical education. Yet, when war broke out, and we ultimately became involved in 1917 and 1918, DOs stood up and tried to volunteer. The Flexner Commission Report and Guidelines were the reason for refusing voluntary service to osteopathic physicians to serve in the military. We were denied access.

My father's cousin, Otis, would have graduated in 1913, but fell in love with a girl in the class behind him. He added a year and spent it in surgery. The only osteopathic hospital in the entire world was in Kirksville, MO. We had no means of meeting those aspects of the Flexner Commission which required us to train in hospitals. It was a Catch-22. Dr. Still, being a physician himself, considered his students physicians. That was satisfactory to him. Medicine started changing after World War I, and vaccines for diphtheria and tetanus started coming out around 1919 to 1920. The Flexner Commission's Report was beginning to change medical education. Most of the for-profit medical schools were shutting their doors with implementation and the vice was beginning to squeeze. The Flexner Guidelines were to dominate the development of the osteopathic profession for the next 100 years.

In response, we added a third year to our curriculum and later added a fourth year. We were still not in compliance because we did not have PhDs teaching our basic sciences—another Catch-22. No self-respecting physiologist, anatomist or PhD would risk his/her career by working for an osteopathic school. That was a career ender. Some of the finest anatomists, like Paul Kimberly and Angus Cathy of Philadelphia, were DOs, but that was not in keeping with the Flexner Commission guidelines. For that reason, we were denied access to hospitals. This was not a problem for my father's cousin. Coming from Indiana, where they had no practice law, he elected not to go home. When he and his wife graduated in 1914, they traveled to Joplin, MO, where they established their practice and lived out the rest of their lives. They were limited to manipulation, which was fine with them. His job was to establish osteopathy as a bona fide profession.

In World War I and immediately after, when the influenza epidemic started, perception started to change

because of the things Dr. Still and his faculty taught his early students. Schools the early students developed spun off in other places like Chicago, Des Moines, Philadelphia, Boston and Los Angeles. What we did with the immune system, stimulating the reticuloendothelial system of the body, were the finest tools dealing with infectious disease before the advent of antibiotics.

What was happening in the profession? There was a battle going on. We realized we were going to have to fall into compliance because the vice was squeezing ever tighter. Besides, the efficacious drugs and vaccines were beginning to become available. The fight was on—are we going to be physicians or are we a limited-practice school, like chiropractic is in this country? We tried to keep the fight quiet as long as A.T. Still was alive. As far as he was concerned, you were physicians and that was the end of it. He refused to let biochemistry and pharmacology be taught in his school. Once he passed away in November 1917, the gloves came off and warfare started. By 1924, we made the decision to remain a full-practice school, which meant we had to change the curriculum.

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My father's generation entered at this time. My father was between his junior and senior years of college, where he was a business major. During his summer vacation, he got on a train to visit his cousin Otis in Joplin, MO. He walked in, sat down in the waiting room and saw that it was full of people. He saw limping people going in to see Otis, and happy people coming out, and money exchanging hands. He said this was a good business and started talking to his cousin. My father went back

to college and started taking the few science courses he needed to get into Kirksville. He was one of the few in his class who had a college degree or any college. He was one of the oldest members of his class.

In 1922, Still's son-in-law, George Laughlin, DO, was so infuriated by his brothers-in-law's mismanagement of the American School of Osteopathy that he started his own school two blocks away called A.T. Still College of Osteopathy and Surgery. By 1924, he bought out his brothers-in-law and combined the two schools. That was the school my father entered four years later in 1928. My father graduated in January with the class of 1932.

It is hard to imagine going into practice without ever setting foot in a hospital or without ever training in one. All the deliveries were home deliveries. There were only six states at that time that would let DOs have full

practice rights, and they were the six most impoverished states in the U.S. I don't think my father knew how to spell Oklahoma and suddenly he is in a car with five other guys headed for that state.

With nothing more than the knowledge he gained in four years, without any hospital basis at all, my father started his practice. He was denied access to the hospitals because of the Flexner Guidelines, even though the hospitals were tax supported. They said, "We won't have the DOs in here. We won't have them in the Army, and we won't have them in the hospitals." He didn't have access to the only x-ray machine in the county. He was reducing fractures by palpation alone. He was doing tonsillectomies in an ENT chair in his office with his friend Robert Beyer, DO, 15 miles up the road. Bob would come down on weekends and drip ether while dad would take out four or five sets of tonsils, and then, a couple of weeks later, dad would drive up the road and drip ether for Bob to do tonsillectomies on his patients. They were delivering in the home because they had no access to hospitals. They did have prescriptions, but it was basically boot-strap medicine. At that time, there was only one hospital in Tulsa, started by a surgeon who needed some place to do his work and some place for his patients to recover. You could admit patients, but they became the founder of the hospital's patients as soon as they went in the door. You did not have practice rights. Dad was his own ambulance service. If he had a high-risk pregnancy or an emergency, he would bundle patients in his car and drive like hell 90 miles to Tulsa to get them in the only osteopathic hospital in the state.

Until we developed hospitals, we realized we could never meet the Flexner Commission Guidelines. We could never have internships; we could never have in-hospital training. At great expense, and unnecessarily so, we had to create a duplicate hospital network. It usually started in a house, and then move to a small building, and then got an addition added here or there. These were the hospitals that I trained in. You had to know the back stairwells and the code because you could get lost in those places. All during the 1930s, 1940s and 1950s, we were building hospitals until we finally had enough slots so that every osteopathic graduate could have an internship. It wasn't until 1955 that we had a cent to divert to research, because it was all going state by state, getting them to drop the old laws and to change the laws giving us full-practice rights. The last state to give in was Mississippi, and they did so

voluntarily because they realized they were missing out on free doctors.

It was a long, hard slough, but our graduates were fired with an enthusiasm and a conviction that they were working with a mechanism that was biased in their favor. It wasn't a belief or faith thing. They knew they had something that the dominant school of medicine didn't have. My father's whole career was based on one case—a shirt-tail relative of the richest man in town, the banker, had viral meningitis and was dying. The five MDs in town didn't want to take the case, because if she died it would be bad for their business. I asked my dad why he took the case, and he said he didn't have anything to lose. He had been there six months, had no patients and was running out of money. He was going to have to move. He didn't even have a car. The patient's father would come and pick him up in the morning, and he would go out and the child would be arched backward like a bow string, and my father would work an hour with soft tissue. He used exhaustive soft tissue and lymphatics. He would get this girl relaxed and the father would drive him back to his office, and he would wait for the two or three patients that would show up. At the close of the day, the father would drive up and take him back to treat the girl again until he had her relaxed. She lived! That banker made sure dad never wanted for patients after that.

The more experience you get, the more you come to realize and rely on the healing from within.

In a year or two, you students are going to be taking the Osteopathic Oath. The most important part of that oath, in my opinion, is right in the middle, and you race over it, just mindlessly saying the words, "... being ever mindful of nature's laws and the body's ability to heal itself." When you say that, I want you to taste every one of those words, because that is the essence of Osteopathy. It will take the rest of your life to learn nature's laws. Every patient you ever treat will teach you more about nature's laws. The more experience you get, the more you come to realize and rely on the healing from within. I heard in a question-and-answer session in a workshop the other day, someone call himself a "healer." I wanted to get up and choke that person. You are not a healer! I never healed anyone. The healing comes from within the patient; I am nothing more than a facilitator.

Think about what the Principles and Philosophy of Osteopathy say. Still's "ah ha" moment was that health is the normal state for the human being—it had nothing to do with manipulation. We are not quite sure where he learned manipulation. But, when he did, he discovered it

was a wonderful tool to accomplish this philosophy. You get well or you don't get well based on your body. It is our job to find out what is preventing the body from restoring this delicate balance we call health, this homeostatic state. Patients live or die based on their bodies, not on the physicians. I will never be able to egotistically say, "I healed somebody."

Now we come to my generation. By age three, I decided I wanted to do what my father did. We moved to California after World War II. They had a law there that, if you graduated from any school other than the College of Physicians and Surgeons prior to 1940, you had to go back and repeat your junior and senior years. My father had to go back and be a junior medical student. The College of Physicians and Surgeons had one thing the other colleges didn't have. It had an agreement with LA County Hospital, one of the finest institutions in America, that every ninth patient was assigned to the osteopathic wing. It was the only school we had with hospital training and that met the Flexner Guidelines. It changed him as a doctor after the first 15 years in practice, delivering babies at home and dealing with pneumonia patients without access to a hospital. Could *we* do these things? He sat up and slept in a chair at the patient's bedside with a wind-up alarm clock waking him up every two hours to treat that patient day and night. He pulled infectious disease patients through.

When I got enough knowledge about this later on, I asked him why he embraced antibiotics, and he said, "Because I didn't save them all." Penicillin was released to the civilian population in 1946, so the start of my life is the start of the antibiotic era, and, effectively, the end of my life may be the end of the antibiotic era. They get more toxic and the bugs are smarter than we are.

What worked a hundred years ago will work a thousand years from now. The human body remains the same. At three years of age, waking up with croup, not being able to breathe—the bark woke up my parents—my mother, an RN, would find the vaporizer and get it ready, while my dad would kneel at the head of my bed and start doing effleurage and soft tissue. I could feel the bronchials opening up. I felt these things as a child. By three, I knew I wanted to do what my dad did; I wanted to make people feel better by putting my hands on them. That's all I knew, but I knew that is what I wanted to do. My father realized by the time I was eight that I was serious about this. So, unlike my brother and sister, if he had house calls, he would invite me to go along. Little did I realize that precious time driving to and from the patient's house and him teaching me things meant that I was sitting out in the car roasting for an hour while he was in the house working.

He asked me to go to the hospital with him. I knew every crack and every stain in the ceiling. I had read every one of the *National Geographic* magazines because it might be two hours before he came back. It was worth it to me to get time alone with him.

I entered Kirksville in 1970. I took two years off to pay off my wife's student loans, because I knew I wouldn't have an income and wouldn't be able to service those loans. So, I had two years between college and medical school. When I got there, the little shining city on the hill was a little muddier and duller than anything I had in my mind, but it was still Mecca. What shocked me was that there was no organized clinical department of osteopathic medicine in that institution anymore. The faculty were geriatric and no one young was behind them. I had two study buddies. Being married with a child by this time, I rented a house. They were bachelors living in toxic waste dumps, so when we were studying for exams, they would take over my living room and my house became study central. My study buddies were Les Kalman, DO, who came from St. Louis, and Joel Cooperman, DO, who just finished serving on the AOA Board of Trustees and practices in Denver. Joel's father and brother were DOs. Here, I was another osteopathic brat. We would sit and talk about the poor quality of instruction and the poor organization of OMM. I was convinced that this subject could be organized, it had to be.

As an eight-year-old child, I could tell the difference between the pre- and post-war graduates. It was something different. It took me decades to realize what the difference was. The pre-war graduates were forced to practice before antibiotics. They proved osteopathy, they were fired with a conviction and they worked like dogs for 18-hour days. For decades, I saw my father for breakfast and dinner. The family sacrificed. That's what it took. All the time, the dominant medical profession was trying to stamp us out.

We were not allowed to receive insurance payments. Blue Cross and Blue Shield (BCBS) was started by the American Medical Association during the depression. They weren't about to give a nickel to a DO until we sued them in 1955. The judge agreed that this was discrimination. BCBS said they would only pay if you were in a hospital, knowing that most DOs had limited access to hospitals. It created a huge shortage of beds if every patient had to be hospitalized. So, the Hill-Burton Act and the Federal Government started building hospitals. They were closing those hospitals starting in the mid-1980s. It is insane what goes on in this country in terms of medical policy.

We were sitting around my house toward the end of my sophomore year talking about this. Les got the idea to

go to the dean and ask him to start a fellowship program modeled on the anatomy fellowship program they had in Kirksville for many years. Les and I went to Ralph Willard, DO, the dean, and asked him. He thought it was a good idea, and a week later, Joel asked if he could come too. The three of us started the fellowship program. We were just trying to solve a local problem. My father said, in a profession as small as we are, "When you identify a problem, you also come up with a solution." Then you roll your sleeves up and start implementing it, and maybe someone else will come to your aid. He said, "Don't wait for George to do it, because George may never show up."

Politics was necessary. Less than 10 years in practice, my father found himself president of the Oklahoma Osteopathic Association. A handful of Still's graduates sparsely settled in Oklahoma, and probably traded the presidency around six or eight times. Now they had this influx of young blood and were more than willing to let the offices go. They had served their generation nobly. My father served for decades in the AOA House of Delegates. When he graduated the second time, in the spring of 1950, having hospital-based training, he knew two things: 1.) We were not staying in California, and 2.) He was not going anywhere that didn't have a hospital.

Once again, DOs during World War II were denied access to serve in the military because they didn't fit the Flexner Guidelines. They said, "Make them medics." That was a mistake because General Hershey, who was in charge of the selective service, was an osteopathic patient. He knew about our capabilities and said he had a better idea. He was going to freeze the DOs, wherever they were, to serve the civilian population and draft all the MDs to send to Europe and the Pacific.

It was easier to give all the tires and gasoline to the doctors—the people parked their cars and walked. My father would go to his office and, if there were people there, he would see them, and then he would get in his car and make a big loop to the south and west, and come home to eat lunch, and then, in the afternoon, go to the other side of the loop. He did this day after day for 18 to 19 hours. When the people came home, they were satisfied with the service they had received. Once again, our profession had stepped up, had taken the leadership and had done what was necessary. The perception of the American public had changed. It changed after the flu epidemic when we had a low death rate compared to the majority profession, and people began to see us as real physicians. After the war, people at home were satisfied with the service they had received.

In the 1960s, the AOA came up with this PR slogan, "same as, plus," but unfortunately, those who graduated after the introduction of antibiotics saw manipulation and everything distinctly osteopathic as an anachronism. It had been replaced by biochemicals. No, it hadn't, it had been supplemented by biochemicals. They soon dropped the "plus" and said we were the "same as." Where has that gotten us? We are now judged by allopathic standards, medically and legally. This is the world you are going to inherit. Could I have foreseen when I went to the dean to start a fellowship program that it would lead to that model spreading to most of our colleges within just a few years? No, not in my wildest imagination. When you throw a rock in a pond, you have no idea how far those waves are going to propagate. I was doing what my father wanted me to do; pull up your sleeves, identify the problem and begin working on a solution. I thought I was working on a local problem.

One of my mentors, James Stookey, DO, was dean at Kirksville and had recruited Paul Kimberly, DO, to replace him as department chairman. They decided, in 1975, to bring the three of us out here to the Broadmoor. That was the first time I came out here, to be shown off, to be a table trainer. I said, "I can't possibly teach someone who has been in practice for 30 years." I was absolutely stunned at the idea. He said, "Don't worry about it. You are better than you think you are, and they aren't as good as you think they are." People like Hal Magoun, DO, and Alan Becker, DO, would take us to dinner and wouldn't let me pay for it. They said to pay it forward, and that's what I am doing for my students. I have one of my students bunking in the extra bed in my room, and I expect you to do the same thing. We stand on the shoulders of the giants that came before us. It didn't just happen; it has been 100 years of sweat and hard work that got us where we are now.

The American Medical Association was founded in 1847 with the devout purpose of creating a medical monopoly. There were two competing schools of practice at that time. The regulars, as Dr. Still called them in his writings, were the heroic school of practice. This basically was an updated humeral version that you had to restore balance in the body by bleeding and the use of mercury compounds (poisons). This is what Still was reforming against, not the medicine you recognize today. That's all the product of the Johns Hopkins model, and we also follow the Johns Hopkins model. It was what Dr. Still added to it, they still don't have it. You might say the AMA was the prototype of the Political Action Committee. It is chartered as a political organization. People say, "Why doesn't the AOA do something?" It was chartered as an educational

organization, and it is limited by its charter as to what it can do. The AMA also has to have a liaison committee of medical educators to do the accreditation of their hospitals and colleges because they are chartered as a political organization.

I was in high school in 1962, when the California Medical Association told the California Osteopathic Medical Association, “Come on, we can merge. We recognize that we are all the same.” So, for \$62, you could turn in your DO license and get an MD license. The majority of the DOs in California fell for that. They thought they would open up all of the hospitals. But, surprise, they were still limited to what had been formerly osteopathic hospitals. We lost one of our best schools, the College of Osteopathic Physicians and Surgeons, which is currently known as the University of California at Irvine. My father was beside himself in Fort Worth, TX. Like many DOs who held California medical licenses, he refused to surrender it. This assured that the office had to remain open to service those people out of state. He became active and expected a domino effect, state by state—it didn’t happen.

Our first new school in decades opened at Michigan State University in 1969. Oklahoma came to us and said they wanted to build a medical school. They came to us because we were not afraid to go to the boondocks. We were used to working with nothing. We didn’t have labs in our offices, and we didn’t have hospitals. Our time had come, our schools began to expand. I was alarmed by the problem—from where were the teachers going to come? Once again, I identified a problem. I thought long and hard during the month of May in 1972 before I signed that contract for the fellowship and decided I would dedicate my career to the greatest problem I saw, which was the lack of educators. My whole career has been in the colleges—teaching the uniqueness, distinctive principles and philosophy of osteopathy. I will not let them die in my lifetime. Then, I decided I would turn as many as I could into teachers.

You are going to be an osteopathic physician. We are still a minority medical profession. If you don’t use it, why did you take the seat in our schools? There is a move right now to convert the Texas college to an allopathic institution. There is still a need for politicians.

You are going to join this profession. When you accepted that position, it meant you accepted that you were

going to join a minority profession. The baton is about to be passed to you. I can think of some problems that your generation is going to have to face. This has troubled me for years as I watch the crushing debt of medical education in schools going up. What does this mean? It means your first love may be to be a generalist, but you know you can’t make enough money to pay off your school debts and raise a family. So, you wind up going into a residency because of the remuneration it brings, and you are stuck with the life that specialty condemns you to. Then, for the next 30 years, you hate what you are doing. The only solution I have come up with is, if you have been accepted into a medical school and you have the grades to maintain in that school (like a military scholarship), your tuition should be paid and you should receive a stipend. In return, you should go to some underserved area and pay it off year for year. Once your debt is gone, you can start a practice debt-free and practice the kind of medicine you want to.

How do we keep alive the truth, Dr. Still’s “ah ha” moment, that health is the normal state of the human being?

With the closings of hospitals, you are now having to go to mixed-staff or allopathic hospitals to do residency programs, where you are the minority. I don’t have the answers, but these are problems you will need to get to work on. Where are your models of osteopathic practice to come from? By getting rid of the “plus” and being referred to as “same as,” we have condemned ourselves to being judged by allopathic standards from a medical/legal viewpoint. Practice protocols are being written that make no allowance for an “osteopathic practice based on the osteopathic philosophy of health and disease.” Now, with evidenced-based medicine, who is going to write those papers and do those studies? Not me, my clinical career has ended. It’s going to be you guys. I encourage you to pick up the burden and carry it as the three or four generations before you have done. How do we keep alive the truth, Dr. Still’s “ah ha” moment, that health is the normal state of the human being? Roll up your sleeves, there is much to do!

Thank you.

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Editor’s Note: During the AAO Convocation in Colorado Springs in March, Richard A. Feely, DO, FAAO, presented the 2011 Harold A. Blood, DO, FAAO, Lecture Award to Dr. Dickey. This article reflects the speech Dr. Dickey presented at that time.

Osteopathic manual treatment of children with scarlet fever in the nineteenth and twentieth centuries

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Abstract

Using several successive and adaptive search strategies, the research for this paper was restricted to childhood diseases of the nineteenth and twentieth centuries, and then further to scarlet fever during this period. The 40 sources used include 30 articles and ten books from the years 1887 to 1957. Based on the selected sources, a qualitative and quantitative analysis was performed and the results are presented. They are related to nine questions, which, among other things, take into account the publication frequency of this epoch, its change over time, treated body regions and underlying, osteopathy-specific etiologies and concepts. A further aspect of the paper focuses on the frequency and duration of the treatments use to treat scarlet fever, accompanying measures and the reported effects.

A number of endogenous and exogenous influences on organs and tissues are named in the presented osteopathic findings. Osteopathic concepts also include general, non-specific regional and local treatment approaches. Specific osteopathic etiological factors can be understood as predisposing factors, and present starting points for a multi-relational and context-dependent understanding of illness and healing. Additional measures to osteopathic manual treatment are similar to the pre-antibiotic mainstream medical approach to scarlet fever.

Introduction

The osteopathic manual treatment of children with infectious diseases has been a part of osteopathic healthcare since its early days. Little is known at present about exactly how osteopaths of the nineteenth and twentieth centuries treated children with infectious diseases, since there is a dearth of current publications on the topic. The subject will be approached using the example of scarlet fever.

Research methods

Using several successive and adapted search strategies, the research was restricted specifically to childhood diseases of the nineteenth and twentieth centuries, then further restricted to scarlet fever during this period. Medical and osteopathic databases (including PubMed, Osteopathic Medicine Digital Repository,

Osteopathic Research Web and the Early American Manual Therapy collection) and historical and current osteopathic journals and books were included (Table 1).

The following books were skimmed for the key words “scarlet fever” and “scarlet.” They are cited here by author and publication date—complete titles are provided in the bibliography for those not contained in the reference list: American Academy of Osteopathy 1998, Arbuckle 1994, Ashmore 1915, Barber 1906, Brookes 1981, Brooks 1997, Brooks 2000, Downing 1923, Fryette 1954, Frymann 1998, Hazzard 1901,³ Hulett 1903, Littlejohn 2009,²⁸ McCole 1935, McConnell 1899,¹⁶ McConnell 1917,⁶ McConnell and Teall 1906,²⁵ Millard 1922,¹⁷ Murray 1925, Page 1927, Sergueef 1995, Solano 1986, Still 1897,¹ Still 1902, Still 1910,⁵ Still 2005,¹⁵ Sutherland 1962, Sutherland 1986, Sutherland 1990, Sutherland 1998, Tasker 1905. Additionally, research on the topic and other expert interviews were performed.

The sources of the selected text references and the search terms used are presented in Table 2. Note: The table only includes sources from which text references to the topic were selected. The pieces from Denslow (1993), Littlejohn (2009) and Willard (1957) were found in book publications. Originally, these texts were published as articles or, in the case of Willard, as individual papers in the *Yearbook of the American Academy of Osteopathy*. For this reason, these pieces are considered to be articles in this paper.

Based on the selected sources, a qualitative and quantitative analysis was performed, and the results are presented. They are related to publication frequency during this epoch; its change over time; the body regions treated; underlying osteopathy-specific etiologies and concepts; accompanying measures; reported effects; the frequency and duration of the treatments; and treatment intervals.

Results

The 40 resulting sources include 30 articles and ten book contributions from the years 1887 to 1957. The most frequently represented literature type is the essay (24), followed by the case study (8), a combination of essay and case study (7), and the study (1) (Figure 1).

American Journals (sorted according to starting year)	
<i>Journal of Osteopathy</i> (1894-1964)	<i>The Osteopath</i> (1915-1918, 1929-35)
<i>Northern Osteopath</i> (1897-1902)	<i>Osteopathic Truth</i> (1916-1921)
<i>The cosmopolitan osteopath</i> (1898-1910)	<i>Journal of Osteopathic Ophthalmology, Rhinology and Otolaryngology</i> (1920-1927, 1929-1943)
<i>The Popular Osteopath</i> (1899-1900)	<i>The Forum of Osteopathy</i> (1927-1960)
<i>Journal of the Science of Osteopathy</i> (1900-1902)	<i>Western Osteopath</i> (1929, 1933)
<i>Osteopathic Knight</i> (1901)	<i>The College Journal</i> (1932-1942)
<i>The Osteopathic Physician</i> (1901-1924)	<i>Clinical Osteopathy</i> (1934-1957)
<i>Osteopathic World</i> (1903-1904)	<i>The Western Alumnus</i> (1937-1945)
<i>Massachusetts Journal of Osteopathy</i> (1903-1910)	<i>Osteopathic Digest</i> (1939-65)
<i>Southern Journal of Osteopathy</i> (1906-07)	<i>Dover Street Clinic Review</i> (1941-1943)
<i>Herald of Osteopathy</i> (1907-1930)	<i>Osteopathic Medicine</i> (1943-1945)
<i>Osteopathic Health</i> (1912-1943)	<i>The Digest of Osteopathic Medicine</i> (1944-1945)
<i>Osteopathic Magazine</i> (1914-1955)	<i>Journal of the American Osteopathic Association</i> (1950-2000)
	<i>Osteopathic Quarterly</i> (1951-1955)
English journals	
<i>British Osteopathic Journal</i> (1960-2000)	
German journals	
<i>Osteopathische Medizin</i> (2000-2010)	<i>Deutsche Osteopathie Zeitschrift</i> (2002-2010)
International journals	
<i>International Journal of Osteopathic Medicine</i> (1998-2010)	

Table 1. Journals searched

Although, at the end of the nineteenth and the beginning of the twentieth century, the presentation of scarlet fever in book form predominated, by the 1950s, it had been replaced by journal articles (Figure 2).

A very significant increase in the osteopathic literature on the treatment of scarlet fever occurs from the beginning to the middle of the twentieth century (Figure 3).

Osteopathic manual treatment of body regions

A majority of the authors (18 of 21, about 86 percent) who made statements concerning the treatment of body regions also mention the spine either in part or as a whole, and 17 authors mention treatment of the cervical spine

(about 81 percent). Six in this subgroup (about 29 percent) pay particular attention to the upper cervical spine region.

The treatment is also directed at other body regions, e.g., the mandible (10, about 48 percent), the head, excluding the mandible region (eight, about 38 percent), the throat (seven, about 33 percent), the ribs (five, about 24 percent), the abdomen in general (five, about 24 percent), the liver (four, about 19 percent), the spleen (four, about 19 percent), the kidneys (three, about 14 percent), the clavicle (three, about 14 percent) and the shoulder (two, about 1 percent).

Furthermore, the sources indicate body regions in the treatment of specific symptoms (e.g., fever and sore throat)

and the treatment of scarlet fever complications (e.g., nephritis, otitis media, heart disease and arthritis).

Conceptual osteopathic manual treatment approaches

The following general treatment concepts could be distinguished: The linking of osteopathic treatment concepts for pediatric illnesses with religious beliefs and a connection with nature;¹ proceeding from the center to the periphery;² consideration of functional activity in developmental periods; the influence of genes and habits; abnormal illness-specific irritability and its effects;

the danger of excess treatment stimulation;²⁴ treatment concepts associated with fever;^{3,4} constitutional treatment;³ elimination of bony and muscular blockages,^{3,5,6,7} e.g., by treating the neck or the clavicle; freeing excretory channels,^{4,5,8} such as the kidneys or by sweating; stimulation of the cutaneous system;⁷ strengthening of the immune system and detoxification;^{10,11,12,13,14} lymphatic treatment;^{5,7,15,16,17} influence on the musculoskeletal system;^{1,11,12,16,18,19,20,21} influence of the blood circulatory system and the nervous system;^{8,10,11,12,13,14,22} treatment approach for the blood, nerves and lymph of the fascial

Sources	Resources	Search terms	Hits	Selected	Authors
Databases	OSTMED-DR (07/2008)	Infant OR child OR Adolescent AND Osteopathic Manipulation OR Manipulation osteopathic	1175	2	Unknown author, 1906; Drinkall, 1923
	OSTMED-DR (02/2010)	Scarlet fever OR Scarlet AND Osteopathic manipulation OR manipulation, osteopathic	17	3	Hoefner, 1904; Morse, 1909; Sherwood/Feidler, 1936
Journals	<i>Herald of Osteopathy</i> (1907-1930)	Scarlet fever OR scarlet	2	2	Reid, 1924; Willard, 1927
	<i>The Cosmopolitan Osteopath</i> (1898-1910)	Scarlet fever OR scarlet	2	2	Pratt, 1900; Rickart/Kennedy, 1900
	The College Journal (1932-1942)	Scarlet fever OR scarlet	6	6	Jones, 1933; McCole, 1933; Price, 1933; Castlio/Ferris-Swift, 1934; Hedges, 1935; Gates, 1940
	<i>Osteopathic Health AOA</i> (1912-1943)	Scarlet fever OR scarlet	4	4	Unknown author, 1912; Unknown author, 1912; Unknown author, 1937; Duffell, 1938
	<i>Osteopathic Magazine</i> (1914-1955)	Scarlet fever OR scarlet	6	6	McMahan, 1933; Steen, 1951; Ulrich, 1941; Duffell, 1942, Duffell, 1943; Drew, 1915
	<i>The Osteopathic Physician</i> (1901-1924)	Scarlet fever OR scarlet	1	1	Beitel, 1910
Books		Scarlet fever OR scarlet	14	14	Still, 1897; Still, 1899; Still, 1902; Still, 1910; McConnell, 1899; McConnell, 1917; Hazzard, 1901; McConnell, 1906; Teall, 1906; Millard, 1922; Murray, 1925; Littlejohn, 2009 (reprint of an article from 1904); Willard, 1957; Denslow, 1993 (reprint of an article from 1933 and an article from 1944)

Table 2. Research overview

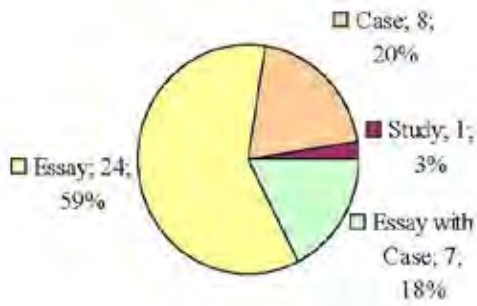
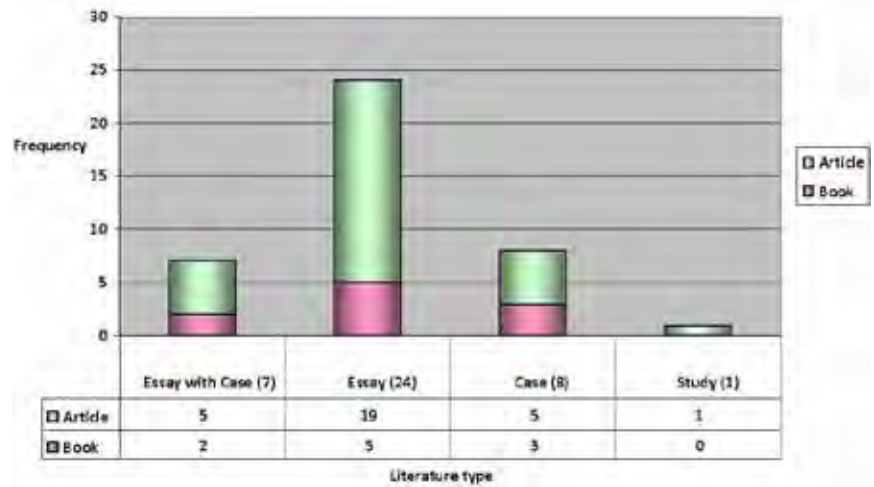


Figure 1 (above). Sources broken down by type of literature

Figure 2 (right). Source broken down by type of publication



system;¹⁵ influence on the activity of the visceral system;⁵ and prevention.^{3,13,20,21,23}

The treatment of numerous scarlet-fever-specific symptoms (e.g., rash, intestinal disturbances, fever, sore throat, headache) and complications (e.g., ear symptoms, post-scarlet-fever nephritis, heart weakness, arthritis) are described. Non-specific or global treatment approaches to influence the entire body, as well as regional and local treatment approaches are also documented.

Documentation of the treatment of somato-visceral reflexes often involves the renal splanchnic region and, relatively often, the intestinal splanchnic and general splanchnic region as well. It more rarely includes the heart center. Influence on the capillary circulation is also described. Inhibition techniques are documented for capillary and general circulation and the abdomen. Viscerally, the abdomen, kidneys, liver, spleen and heart are treated.

It is also noted in numerous sources that tissue should be relaxed, in particular the back musculature and the neck.

The sources also describe techniques for the clavicles, neck, mandible, back, ribs, abdominal region, renal vessels and the stimulation of the kidneys and spleen. Treatments are also documented for the region between the eyebrows, drainage of the pharynx, treatment of the roof of the mouth and tonsils, and inhibition to influence the capillary circulation and hyperesthesia preparatory for the performance of additional techniques.

Further and accompanying therapeutic measures

Twenty-four (of 40) sources were found in which information on continuing and accompanying therapeutic measures was provided. The most frequently documented

were related to diet or fasting (nine, about 38 percent), hydrotherapeutic measures (eight, about 33 percent), sterilizations and/or disinfection and/or hygienic measures (nine, about 38 percent), bed rest (five, about 21 percent), directions for enemas and an interest in regular bowel movements (eight, 33 percent).

Osteopathic-specific etiological factors, osteopathic dysfunctions/lesions or osteopathic findings

The following osteopathic-specific etiological factors, osteopathic dysfunctions/lesions and osteopathic findings were documented in the text sources: Endogenous and exogenous influences on organs and tissue and/or life errors (e.g., nutritional errors^{11,12,24}); reduced resistance during convalescence from measles;²⁵ impairment of excretory function in organisms;²⁴ impairment of arteries and veins,^{5,7,24} such as the head and brain and/or drainage of the tonsils or the pharynx; congestion in the fasciae;^{15,24} impairment of the lymphatic system^{5,7,15,24} and organ findings.^{6,24}

General osteopathic lesions, in the sense of mechanical disturbances in the body or a limitation of mobility, were connected to scarlet fever^{4,11,12,13,20,21,25,26} and bony and/or muscular lesions in the region of the spine and the cervical spine,^{3,6,18,20,21,26,27} in the shoulder, hip, and thorax regions;¹⁸ and in the throat region, hyoid, mandibula and clavicle¹⁷ in particular. Documented secondary findings for scarlet fever were an impairment of the mucous membrane of the middle ear¹⁷ and scoliosis.²⁸

Effects and prognoses for osteopathic manual treatment

The prognoses given in the texts vary greatly. In three sources, a positive prognosis was made. According to Still,¹ scarlet fever can be cured in only three days. In four

sources, the prognoses vary greatly and are rather guarded. One source reports that, in children younger than one year, a greater mortality is associated with scarlet fever than in older children.⁶ According to McMahan,²⁹ scarlet fever is the most dangerous eruptive illness. Possible complications include ear and kidney illnesses,^{29,30} as well as eye illnesses and rheumatic complaints.²⁹

Overall, according to the great majority of authors, osteopathic treatment is successful,^{1,3,13,18,20,25,31} or has good results.^{2,29} In the majority of cases, a permanent recovery is the rule.³⁰ The risk of complications can be reduced through osteopathic treatment, according to an unknown author.^{10,23,29}

The progression of the illness and/or its duration is improved by osteopathic treatment.^{9,10,23} Beitel notes that the osteopath should be called in a timely manner.⁷ According to an unknown author,²³ an osteopathic treatment works better than a conventional medical treatment. In all sources containing a case study,^{9,18,19,32,33} a recovery was achieved. In one case, the state of health was recorded to be even better than it was before the illness.³¹

Frequency and intervals of osteopathic manual treatments performed

Based on the available information, one can speculate that two authors treated between three and nine times, one of those authors over a period of three weeks¹⁹ and Dr. Still⁵ over a period of three days. In two sources, at least at the beginning of an illness, multiple treatments per day were given.^{4,5} In two cases, daily^{3,32} treatments were given. Another source indicated treatments being given three days per week.¹⁹

Discussion

It must be considered that essays, studies and case studies from the nineteenth century and the beginning of the twentieth century do not meet current criteria. However, the majority of the text sources found originate from this time. According to Gevitz,³⁴ for example, case studies, at least in the early period of osteopathy, were published for marketing reasons and did not necessarily provide accurate reports of disease progressions. Nevertheless, they provide insight into osteopathic procedures and interpretations of the time. Qualitative and quantitative evaluations allow an overview of the osteopathic literature on scarlet fever.

Penicillin was discovered in 1928. From about the middle of the 1940s, it was produced in sufficient quantities for the civilian population.³⁵ It is striking that, after this time, only one source out of the 40 osteopathic publications on scarlet fever was found.³¹ It must therefore be assumed that the decline in osteopathic literature on the treatment of scarlet fever correlates to the medical treatment of scarlet fever with penicillin. At present, this form of treatment is also considered reliable for almost all streptococcal strains.³⁶ According to Gevitz,³⁴ within American Osteopathy, the method for the treatment of infectious diseases changed starting in 1930 from a manual treatment of osteopathic lesions to an increasing combination of manual and pharmaceutical treatment. As late as 1910, Beitel wrote that the hands of the osteopath are his thermometer and syringe.⁷

In Osteopathy, microbiological etiologies are not necessarily negated, and from the perspective of osteopaths of that time, could also play an active role in the development of illnesses, while osteopathic-specific etiological factors such as spinal lesions are viewed as a predisposing factor.³⁴ The therapeutic approaches

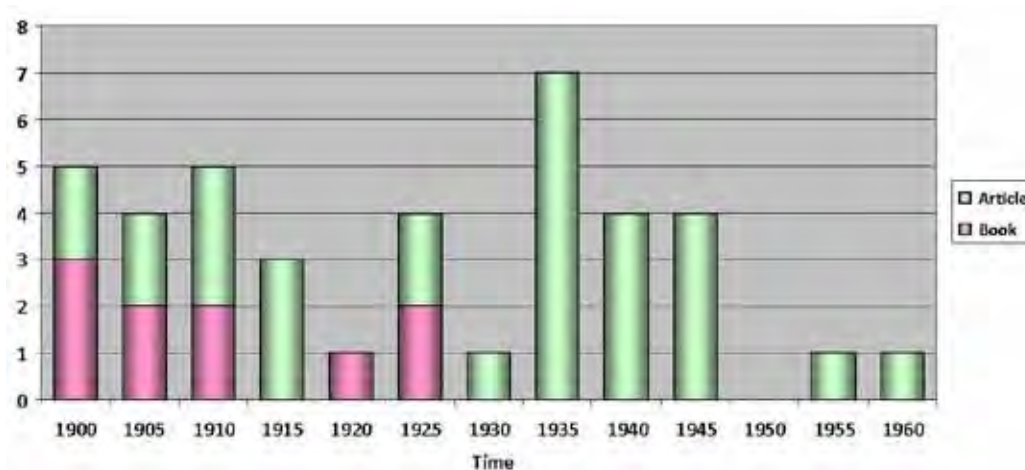


Figure 3. Publication frequency in five-year intervals broken down by type of publication

show multiple interdependent connecting factors in the improvement of the body's homeostasis during scarlet fever. The release of bony and muscular blockages to improve blood vessel and nerve function is a central tenet, as is the treatment of the immune system (e.g., through treatment of the spleen and the local and general lymphatic system), detoxification (e.g., treatment of the liver) and excretion (e.g., stimulation of the kidneys and the skin) and the neurovegetative system (e.g., through inhibition and somato-visceral reflexes).

From this perspective, in the case of an infection, osteopathic treatment would enable the body's immune system to better react to illness-causing microorganisms.^{37,38} Additional and accompanying measures for osteopathic manual treatment are similar to the pre-antibiotic mainstream medical approach for scarlet fever.

Conclusion

The abundance of text sources makes it clear that the osteopathic manual treatment of scarlet fever at the end of the nineteenth century and in the first half of the twentieth century was not a coincidence. On the contrary, it seems likely that the osteopathic manual treatment of scarlet fever was often performed by osteopaths during this time.

A number of endogenous and exogenous influences on organs and tissues are named in the presented osteopathic findings. Specific osteopathic etiological factors can be understood as predisposing factors. Osteopathic treatment, as well as examination, represents a starting point for a multi-relational and context-dependent general understanding of illness and health and non-specific regional and local treatment approaches. The release of

bony and muscular blockages to improve blood vessel and nerve function is a central tenet, as is treatment of the immune and neurovegetative systems, detoxification and excretion.

Descriptions of the osteopathic approach to scarlet fever disappeared with the introduction of immunizations. However, the question remains whether elements of the historical interventions described can also be used in complementary treatments today. Further studies are necessary, such as ones on the extent to which osteopathic treatment concepts and treatments exhibit similarities across the treatment of different childhood illnesses, and to what extent comparisons and the transfer of the results of this thesis to other infectious childhood illnesses (e.g., measles and chickenpox) are possible.

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CME QUIZ

The purpose of the quiz found on page 27 is to provide a convenient means of self-assessment for your reading of the scientific content in "Osteopathic manual treatment of children with scarlet fever in the nineteenth and twenties centuries" by Torsten Liem, DO (Germany) and Cristian Ciranna-Raab.

Answer each question listed. The correct answers will be published in the December 2011 issue of the *The AAO Journal*.

To apply for Category 2-B CME credit, transfer your answers to the AAOJ CME quiz application form answer sheet on page 27. The AAO will record the fact that you submitted the form for Category 2-B CME credit and will forward your test results to the AOA Division of CME for documentation. You must have a 70 percent accuracy in order to receive CME credits.

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June 2011 AAO Journal CME quiz answers:

1. A
2. C
3. D
4. A

Answers to September 2011 AAOJ CME quiz will appear in the December 2011 issue.

Complete the quiz below by circling the correct answer. Mail your completed answer sheet to the AAO. The AAO will forward your results to the AAO. You must have 70 percent accuracy in order to receive CME credits.

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1. Which of the following is TRUE about general osteopathic lesions and scarlet fever?

- A. Bony and/or muscular lesions in the region of the spine
- B. Documented primary findings were an impairment of the mucous membrane of the middle ear
- C. Documented primary findings was scoliosis
- D. Documented secondary findings were impairments in the throat region

2. According to the authors, Osteopathy negated microbiological etiologies.

- A. True
- B. False

3. Which of the following is TRUE regarding improvement of the body's own homeostasis during scarlet fever?

- A. Release of bony and muscular blockages to improve detoxification
- B. Stimulation of the kidney and skin to improve excretion
- C. Treatment of the liver to improve blood vessel and nerve function
- D. Treatment of the spleen to improve the immune system

4. Descriptions of the osteopathic approach to scarlet fever disappeared with the introduction of immunizations.

- A. True
- B. False

Prolotherapy Weekend

October 6-8, 2011 at UNECOM

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Thursday, October 6 (5:00 pm - 10:00 pm): This is required for those physicians who have not taken a prior course in prolotherapy. It will include an introduction to prolotherapy, wound healing, degenerative postural cascade, coding and billing.

Friday and Saturday, October 7 - 8 (8:00 am - 5:30 pm): Participants will be divided into two groups, beginners and advanced. These two groups will alternate between lectures in anatomy and injection technique, while the other group will be in the anatomy lab performing injections under supervision and reviewing prosections.

**Principles of Prolotherapy* by Ravin TH, Cantieri MS and Pasquarello GJ, will serve as course syllabus. Please see <http://principlesofprolotherapy.com/index.html> for details.

Presenting:

Mark S. Cantieri, DO, FAAO, Program Chair

George J. Pasquarello, DO, FAAO

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CME:

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Prolotherapy Weekend, October 6-8, 2011

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Nickname for Badge: _____

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City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

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By releasing your fax/e-mail you have given the AAO permission to send marketing information regarding courses via fax or e-mail.

AOA#: _____ College/Yr Grad: _____

I require a vegetarian meal

(The AAO makes every attempt to provide snacks/meals that meet participant's needs but cannot guarantee to satisfy all requests.)

Registration Rates

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\$1,510 - Please order me a copy of *Principles of Prolotherapy*

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Make checks payable to "American Academy of Osteopathy"

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Cardholder's Name: _____

Expiration Date: _____ 3-digit CVV#: _____

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Sutherland's Signature

Jane Stark, DOMP (Canada)

Andrew Taylor Still and William Garner Sutherland (WGS) are two of osteopathic medicine's most significant figures. However, the volume of catalogued material relating to the life and life's work of Still exceeds that of Sutherland. This discrepancy in Still's favor came about when a handwriting comparison study was completed, on papers suspected of being written by Still, to assist in the attribution of some of those documents to Still's hand. Documents which did not bear any substantiating markers, such as Still's letterhead, name or signature, were compared to known samples of his penmanship. Since the creation this handwriting key, over a thousand pages of Still's unpublished papers have been identified, and funding provided that has allowed them to be transcribed, digitized and made available online.

To date, osteopathic archivists, as well as other members of the osteopathic profession, lack a similar tool for identifying Sutherland's handwriting and typewriting. To remedy this problem, a list of key style characteristics of his writing and typewriting, which can be used to help identify material that does not bear his name or signature, is offered later in this article. This key should not only assist, but, more importantly, allow private collectors of osteopathic material to more readily recognize Sutherland's work.

Unfortunately, recognizing documents such as rough notes, letters, or speeches penned by influential osteopaths, does not ensure that these documents will be preserved. In the foreword to the 1992 edition of A.T. Still's last book, *Osteopathy Research and Practice*, Harold Goodman, DO, lamented the lost opportunity to salvage "very rare osteopathic materials"¹ belonging to one of A.T. Still's students. The material was described by Goodman as being "lovingly collected" for almost a century and included a "large number of osteopathic writings."¹ Following the death of this unidentified osteopath, her relatives made efforts to donate the collection to various osteopathic groups. Sadly, none expressed interest in preserving the collection, and all but a small fraction of the material was lost.

It would be extremely unfortunate if the writings of William Garner Sutherland experienced a fate similar to those of A.T. Still. Important historical documents may be permanently disregarded, discarded or destroyed, adversely affecting both the history and future of

osteopathic medicine, unless they are recognized, retrieved and preserved. Certainly, there are unpublished photos, letters, speeches and memorabilia belonging to WGS that are held by private collectors who may never relinquish them to institutional archives. More importantly, however, there may be memorabilia and writings, which neither their current owners, nor their heirs, would recognize as being historically valuable. For those who may come upon such historical treasures, a list of repositories is offered where such papers can be safely stored, catalogued, and with adequate funding, be made accessible to the entire profession.

Although WGS penned many writings related to osteopathy, his name or signature is not always present as a means to identify his work.² Furthermore, his signature does not appear in a consistent form on documents presumed to be written by him. He also utilized aliases. As late as 1931, WGS published under the pen name "Blunt Bone Bill." Personal letters were signed with odd nicknames, such as "William Gee-Horse A-Fat"³ or "William Dolittle Much."⁴ Some of his unpublished typewritten speeches do not display his name,^{5,6} among them *Philosophy of Osteopathy: And its Application by the Cranial Concept - draft: An Introduction to To-Day's Talk.*⁷

These unpublished speeches were attributed to WGS on the basis of being in physical proximity to similar looking material,⁸ including numerous documents which did bear his name. Among this material were some handwritten and typewritten letters from WGS addressed to Anne Wales, DO (and to her husband, Chester Handy, DO), who saved them.⁹ Following his death, WGS's personal papers were left with his wife Adah (Strand) Sutherland, who later entrusted them to Anne Wales, DO. Together, WGS's personal papers, and those collected by Wales, were passed to John H. Harakal, DO,FAAO,¹⁰ in the 1980s, who accepted them on behalf of the Texas College of Osteopathic Medicine, where they were originally stored.¹¹ Presently, the collection is archived as the *Sutherland Collection* and housed within the Gibson D. Lewis Health Science Library Archives at the University of North Texas Health Science Center in Fort Worth, TX. Should these papers, which bear no identifying markers, ever become separated from the main collection, or should additional copies or similar types of documents be found elsewhere, they may never be attributed to WGS.



Figure 1. Left and right matters of *The Cranial Bowl*, 1939, with the accompanying signature of William Garner Sutherland. Sutherland Collection, Gibson D. Lewis Health Science Library Archives, University of North Texas Health Science Center, Fort Worth, TX. (With permission).



Figure 2. Close up of Sutherland's signature and inscription from the right matter of the first copy of *The Cranial Bowl*.

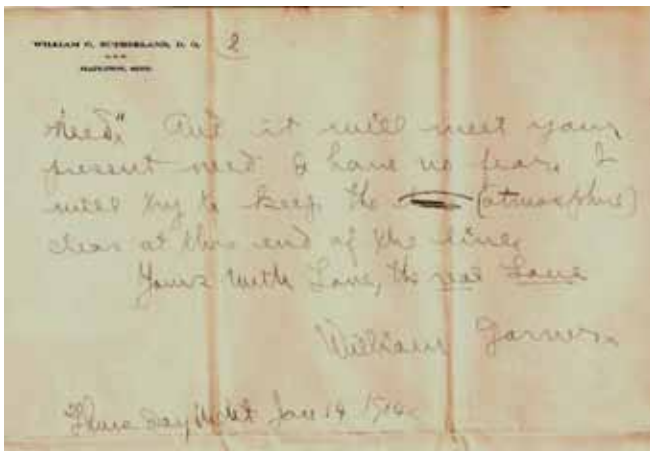


Figure 3. Letter (page 2) to William Garner Sutherland's brother, Guy Roy Sutherland. January 14, 1904.

Identifying, retrieving and preserving the memorabilia and personal writings of WGS may seem inconsequential. However, these seemingly trivial details may one day prove to be invaluable aids in understanding Sutherland's life and work—the tiniest piece of information could lead to the clarification of an ambiguous term or idea. In fact, there are several major topics that need elucidating. For instance, it is widely assumed that WGS was the founder of the cranial concept, but can that assumption be substantiated by documentation?

The profession of chiropractic actually claims that one of its members, Nephi Cottam, DC, was the first modern-day practitioner to present a cranial concept. He called it Craniopathy. Authors Calvin Cottam and Erin MacGillivray provide compelling evidence that the concept of cranial manipulation was first put forward by Nephi Cottam four years before WGS.¹² Their 1981 peer-reviewed article, *The Roots of Cranial Manipulation: Nephi Cottam and 'Craniopathy,'* is so convincing that a reader could easily be persuaded that Nephi Cottam conceived a form of cranial work prior to Sutherland.

Although the title of originator of cranial articular mobility and of the cranial concept is not a topic of controversy at this time, it may become a contentious issue in the future. Nephi Cottam's son, Calvin, collected data on the histories of cranial techniques—both osteopathic and chiropractic. He amassed over five linear feet of material.¹³ Based upon his review of that material, he concluded that Cottam announced the idea before WGS. Calvin Cottam wrote, "[Nephi] Cottam's first professional presentation was January 27, 1929. Sutherland's Osteopathic Techniques, SOT, was first presented eight months later, on September 27, 1929."¹³ It could, therefore, benefit the osteopathic profession to pay close attention to any unpublished documents that might have issued from the pen or typewriter of WGS.

Fortunately, WGS was a collector.¹¹ He kept personal material dating as far back as 1895.¹⁴ Wales explained that, by saving his own biographical information and work, WGS "preserved the record of his thinking and work."¹⁰ Judging by the volume of letters in the Sutherland Collection written by WGS to Wales (and her husband, Chester Handy, DO) there may be hundreds, if not thousands, of similar letters written to other colleagues currently held in private hands.

When WGS's daughter, Alice Paschal, his only direct descendant, passed away in 2001,¹⁵ she was not in possession of any of her father's writing.¹⁵ One grandnephew, Roy Ulrich (now deceased), did have a few letters written to his grandfather, Guy Sutherland, who was



Figure 4. The first page of a letter written to Anne L. Wales. Ground Hog Day, 1947. Sutherland Collection, Gibson D. Lewis Health Science Library Archives, University of North Texas Health Science Center, Fort Worth, Texas. (With permission).

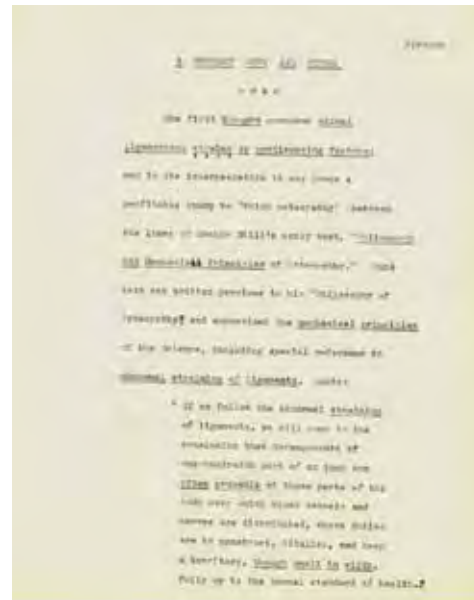


Figure 5. Sutherland[?] WG. *Philosophy of Osteopathy: And its Application by the Cranial Concept - draft: A Thought Here and There*. n.d.:15-28. Located at Sutherland Collection, Gibson D. Lewis Health Science Library Archives, University of North Texas Health Science Center, Fort Worth, Texas. The actual size of this page is 8.5" x 11."

WGS's brother. WGS's surviving niece, Alberta, along with three of WGS's grandnephews, Max, Dennis, and Glenn, all living descendants of WGS's siblings, do not possess any of WGS's letters. Presumably, if more of WGS's unpublished work exists, it is most likely in the possession of osteopathic physicians, or is contained within the estate holdings of individuals outside the osteopathic profession with whom he had personal or business relationships. While the latter section of correspondence may be difficult to obtain, material residing with osteopathic physicians should be identified, lest it be discarded. For historical completeness, and in honor of William Garner Sutherland's memory, it behooves the profession to ensure that all of his work, no matter how trivial, is found and preserved for the benefit of all.

Prior to describing the distinguishing characteristics of someone's handwriting, the attribution of that writing must first be authenticated. In Sutherland's case, the signature that appears on the first copy, WGS's copy, of *The Cranial Bowl*, can safely be assumed to belong to WGS. (Figure 1). Along with his signature, there is an inscription that highlights several very revealing penmanship characteristics (Figure 2). These characteristics include: the use of an "x" following his signature and in place of the dot over the letter "i" the underlining of the letter "u" and the

overlining of the letter "n(overline)."

Two other examples of Sutherland's handwriting, taken from his personal correspondence, provide more features of his distinctive style. Figure 3 shows page 2 of a letter, dated 1904 (25years prior to the inscription on *The Cranial Bowl*), written by Sutherland to his younger brother, Guy =Sutherland. It was composed on Sutherland's personal letterhead and bears his signature. Here, he also uses the letter "x" as the period at the end of the sentence, to dot the letter "i" and following his signature. However, the letters "u" and "n" are not lined.

The second sample (Figure 4) is written in 1947, eight years after the signing of *The Cranial Bowl*. Although this single page from the letter is not signed by Sutherland, the envelope in which it was sent confirms Sutherland was its author.

Here again can be seen the frequent use of the letter "x," along with the underlining of the letter "u" and the overlining of the letter "n(over)."

This author has examined many more examples of WGS's penmanship. There are several commonly observed features found in the majority of his handwritten correspondence that would allow easy recognition of his handwriting.

- In the 1940s, he consistently underlined the letter “u” as in “June” in Figure 2 and “Ground,” “sausage,” and “clouds” in Figure 4.
- He frequently overlined the letter “n,” as in “June” in Figure 2 and “Anne” in Figure 4.
- He employed an “x” over the letter “i” instead of a dot. He also used an “x” in place of a period and following his signature.
- His letter “t” was inconsistent, yet displayed a certain deliberateness. The cross was often angled horizontally (—), although occasionally it was slanted diagonally up and to the left (/) or, infrequently, diagonally down and to the right (/).
- The loops of the tall letters, such as the “h,” “l” and “d,” were generous.

Upon examining the entire page, the following characteristics are evident:

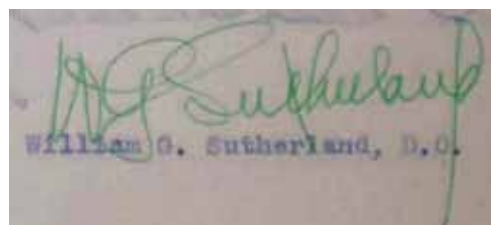
- He used extra wide margins at the top, bottom, left and right.
- The lines pacing was equal or double the height of the letters.
- His handwriting was large, with capitalized letters sometimes as tall as one centimeter.
- The large writing, extra-wide margins and generous line spacing meant there were only five to seven words per line and 10 to 13 lines per page.
- He made liberal use of emphasizing marks, especially “quotation marks” and underlining. For example, notice the quotation marks around “Ground Hog” and “Old Sal.”
- He underlined words individually, not continuously, once, twice and three times. Notice how, after using the word “love” in Figure 3, he then restates it as “real Love.” In Figure 2, he underlines the number 22 three times—most likely because June 22 coincided with the date in 1874 when A.T. Still claimed the idea of Osteopathy came to him.¹⁶

It is also worth noting that his typewritten pages can be recognized by some of the previously listed features—wide margins, generous line spacing (thus, few words per page) and the frequent word by word (not continuous) underlining for emphasis.⁷ (Figure 5).

One final distinguishing feature of Sutherland’s writing is the peculiar bright green colour of the ink.

(Figures 1 and 2). This bright colored ink can be found throughout a large portion of his correspondence. Although WGS probably did not use a pen with green ink, it is noted by Sutherland’s grandnephew, that some inks oxidize over time as a result of exposure to moisture and ultraviolet light.

So please, “DIG” through your old notes and boxes of papers. If you find something written in bright green ink, with large handwriting, underlined, and dotted with the letter “x,” you may have a treasure from the pen of one of the all-time great osteopaths.



Author’s Note

Cheryl Gracey, former curator of the Still National Osteopathic Museum, now known as the Museum of Osteopathic MedicineSM and the International Center for Osteopathic History (ICOH) is credited for analyzing some of the different handwritings on papers considered to belong to A.T. Still. She compared confirmed examples of A.T. Still’s handwriting other than his signature (e.g., signed letters, book inscriptions) to tentatively distinguish documents written in Still’s hand from those written by others. These results are available for viewing online through the ICOH’s finding aid for A.T. Still Papers at http://www.atsu.edu/museum/collections/pdfs/finding_aids/ATSPIntro.pdf, as well the Andrew Taylor Still Papers section of the Missouri Digital Heritage Web site, http://www.sos.mo.gov/archives/mdh_splash/default.asp?coll=atsu.

Further Information

It is vitally important to osteopathy’s rich history that material pertaining to William Garner Sutherland is retrieved and preserved. There are currently three primary repositories for such findings. The first is the Sutherland Collection at the University of North Texas Health Science Center, managed by reference librarian/archivist Kathy Broyles, MLS, AHIP. The second is the Osteopathic

Cranial Academy (OCA) archives, held at the OCA's office in Indianapolis, IN. The OCA can be contacted at (317) 581-0411 or info@cranialacademy.org. The third repository is the Cranial Osteopathy Collection, housed in the Museum of Osteopathic MedicineSM and International Center for Osteopathic History (ICOH), in Kirksville, MO. The Museum is directed by Jason Haxton, MA, who can be contacted at (660) 626-2359 or jhaxton@atsu.edu. The curator for the history section is Debra Loguda-Summers, who can be contacted at (866) 626-2878, ext. 2359 or dsummers@atsu.edu. Anyone in possession of material pertaining to the life and history of William Garner Sutherland who wishes to donate or entrust their holdings are encouraged to contact the listed repositories.

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Dynamics of indicators of quality of life in patients with chronic pain syndrome in the lumbus and lower extremities after osteopathic treatment

G.V. Yakovets, DO; S.V. Novoseltsev, DO

Abstract

Osteopathic treatment of the patients with pain syndromes in the lumbus and lower extremities definitely results in the improvement of physical, as well as psychological, elements of the quality-of-life index.

Introduction

More than 50 percent of people of working age have, in the course of their lives, episodes of pain in the back, which have nothing to do with inflammatory, systemic, oncologic or metabolic diseases. Changes caused by lumbar osteochondrosis are detected with an x-ray in 50 percent of people over the age of 50. Moreover, society and patients incur large financial losses because of frequent hospitalizations and long periods of temporary disability.

Presently, there are different methods of treatment for such conditions, including manual therapy. However, a proper, complex assessment of the efficiency, including long-term efficiency, of these treatment methods is needed. Lately, interest in the assessment of not just medical results of treatment, such as the manifestations of disease or its absence, but assessment of the social and psychological

consequences of disease—that is, how comfortable a patient feels in society—has increased considerably.

There are five principal, generally-recognized treatment assessment categories:¹ vertebral column functions; medical conditions in general (“quality of life”); presence or absence of disease; work incapacity; and patients’ satisfaction with the result. Quality of life (QL) is an integral feature of the physical, psychic, emotional and social functioning of an individual based on his/her subjective perception. In this work, a comparative analysis of the qualitative results of osteopathic and traditional treatments of patients with pain syndrome in the lumbus and lower extremities is presented.

Within the limits of the analysis, it was taken into consideration that quality of life is, first of all, determined by the way the patient assesses the degree of his/her satisfaction with various aspects of his/her life in connection with real or expected changes caused by disease and its consequences and related to medical supervision and treatment. On the basis of these ideas, it was decided to research whether osteopathic correction is an efficient, expedient and preferable method of treatment of this

Inclusion criteria	Exclusion criteria
Pain syndrome lasting more than six months	Clinically significant symptoms of neurologic impairment which are active at the start of treatment
Active complaints before and at the start of the research	Destructive processes and/or apparent osteoporosis of vertebral bodies (according to visualization evidence)
Male	Evident constrictive process in a vertebral canal (according to visualization evidence)
Age 30 - 60	Suspected vascular (ischemic) genesis of the disease
Diagnosis of lumbodynia/lumbar ischialgia or local myofascial pain by a neurologist	Neurosurgical operations on the vertebral column in past history
Completion of instrumental vizualizing examination (computed tomography/ magnetic resonance imaging) of lumbar spine and sacral spine	Severe associated diseases: high degree of arterial hypertension, coronary heart disease, cardiac malformations, cerebrovascular disease, cardiovascular collapse, respiratory or renal failure, non-compensated diabetes mellitus, rheumatologic diseases in active phase (including febrile states of non-specified origin), chronic infectious disease, mental illness (including those in past history), actual or suspected malignant neoplasms (including those in past history)

Table 1. Criteria for inclusion in and exclusion from the research.

Parameters of the groups	Index group	Control group	Total
Number of patients (n) at the beginning of the research	15	15	30
Number of patients (n) at the end of the research	15	15	30
% of patients who completed the research	100	100	100
Average age of the patients, years	45, 5±1, 7	43, 1±1, 3	44, 0±1, 1
Minimum age of the patients in years	35	35	35
Maximum age of the patients in year	55	53	55

Table 2. Characteristics of index group and control group.

No.	Research method	Comments
1.	Collection of complaints and anamnesis	Checkup, including testing according to inclusion/exclusion criteria
2.	Neurologic examination	Completed by neurologist with the diagnosis recorded
3.	Visualizing instrumental examination of sacrolumbar spine (computed tomography/magnetic resonance imaging)	Checkup, including testing according to inclusion/exclusion criteria. The results of earlier examinations (no older than one year) were taken into consideration.
4.	SF-36 health survey	Methods of the survey results processing and scale indices calculations are given in Appendix 1.3, while the results of primary processing of index group survey results in Appendix 2.1 and control group survey results in Appendix 2.2.

Table 3. Examination of the research participants.

pathology by studying medical parameters of a patient's quality of life.

Research Objectives

The goal of this study was to assess how osteopathic treatment influences the quality of life of patients with chronic pain syndrome in the lumbus and lower extremities. It further aimed to achieve the following:

1. To formulate criteria for the selection of patients for the research, and to form an index group and a control group.
2. To formulate a research design, which included algorithms of osteopathic diagnostics and treatment.
3. To compare changes in the quality of life of patients with chronic pain syndrome in the lumbus and lower extremities within the limits of osteopathic and pharmaceutical treatments.

4. To assess the durability and stability of the predicted improvement in the quality of life of patients after treatment completion.

Research Methods

The authors selected 30 patients for the research. The index group consisted of 15 males from the age of 35 to 55 years old (average age of 45, 5±1, 7) with lumbodynia/lumbar ischialgia syndrome without associated neurologic symptoms of "prolapsed." The criteria according to which patients were included in the group, or excluded from it, are shown in Table 1. The control group was comprised of 15 male patients from the age of 35 to 53 years old (average age 43, 1±1, 3) selected in the same way as the index group. Information about the participants and characteristics of the groups is presented in Table 2.

Before treatment, all patients were examined according to the research methods listed in Table 3. Moreover, index-group patients were interviewed from an

osteopathic viewpoint, osteopathic anamnesis was collected and primary osteopathic diagnosis was done. Index group patients underwent a course of osteopathic treatment comprised of six to eight therapeutic sessions according to the following scheme: two sessions with a break of three to four days between; two to three sessions with a break of one week between; and two to three sessions with a break of two weeks.

The choice of treatment method was determined based on the nature of the osteopathic affections detected and on osteopathic dynamics. During the course of osteopathic treatment, patients were asked to abstain from other forms of treatment. Those who had to keep physically active were allowed to wear immobilizing dorsolumbar orthosis. The total length of the treatment period for the index group patients was four to six weeks. The control group patients were treated in a standard way under a neurologist's supervision, which included:

1. Limitations of motion (some patients used immobilizing dorsolumbar orthosis).
2. Individually prescribed medicines (in most cases, a combination of NSAID nimesulide 200 mg/day and neuromuscular relaxant Mydocalm 300 to 450 mg/day in the course of 10 to 14 days with further intake cessation or dosage decline).

3. Sacrolumbar spine massages (10 sessions).
4. Physiotherapy (an individual program was formulated by a physiatrist).
5. Remedial exercises according to the individual program recommended by a coach.

As soon as the treatment was complete, patients in both groups underwent a final examination, which consisted of collecting complaints, a second neurological examination and questioning within the limits of the SF-36 health survey (clauses 1, 2 and 4 in Table 5). Index-group patients underwent final osteopathic testing according to an algorithm similar to the first diagnostic tests. The results of the final diagnostic tests were recorded as well.

During the final round of research, five to six months after the end of the active treatment phase, patients in both groups were questioned within the limits of the SF-36 health survey. The indexes that were analyzed and compared are shown in Table 4.

Quality-of-life physical element

In the index group (Table 5, Diagram 1), the original integral point, according to the quality-of-life physical health scale (PH) of the SF-36 survey, was $43, 8 \pm 1, 4$; while the minimum point was $18, 6 \pm 4, 0$, according to pain

	Before Treatment	After Treatment	Six months later
Indexes of separate scales of physical health (PF, RP, BP, GH) and integral indicator of physical health (PH)	0	1	2
Indexes of separate scales of mental health (VT, SF, RE, MH) and integral indicator of mental health (MH)	0	1	2

Table 4. Average values of SF-36 health survey scale indexes.

	PF	RP	BP	GH	PH
Original (0)	44, 7±4, 4	25, 0± 7, 7	18, 6± 4, 0	35, 0± 4, 1	43, 8± 1, 4
After treatment (1)	65, 7±4, 7	80, 0± 5, 6	73, 5± 3, 9	59, 9± 3, 2	51, 5± 1, 4
Six months later (2)	57, 3±3, 7	70, 0± 5, 0	68, 4± 3, 3	55, 6± 3, 0	49, 6± 1, 2
Δ(1-0)	21, 0±4, 0	55, 0± 8, 9	54, 9± 4, 2	24, 9± 3, 0	7, 7± 1, 5
Δ(2-0)	12, 7± 3, 2	45, 0± 9, 2	49, 8± 3, 9	20, 6± 2, 6	5, 8± 1, 2

Table 5. The dynamics of results within the limits of SF-36 health survey testing in the physical health index group.

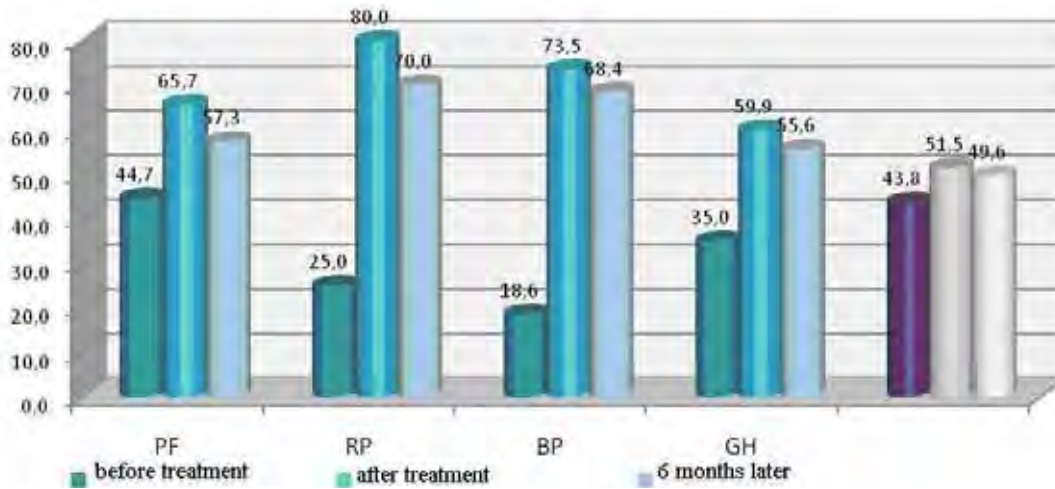


Diagram 1. The dynamics of physical health indexes according to the SF-36 survey—Index group.

	PF	RP	BP	GH	PH
Original (0)	46, 0±	45, 0±	22, 9±	33, 3±	45, 6±
After treatment (1)	54, 0±	68, 3±	57, 5±	49, 9±	48, 2±
Six months later (2)	39, 7±	60, 0±	36, 8±	37, 1±	46, 0±
$\Delta(1-0)$	8, 0± 1, 9	23, 3±	34, 5±	16, 6±	2, 7±
$\Delta(2-0)$	-6, 3± 1, 8	15, 0±	13, 9±	3, 8±	0, 5±

Table 6. The dynamics of results within the limits of SF-36 health survey testing in the control group (quality-of-life physical element).

intensity (BP) scale; and the maximum point was - 44, 7±4, 7, according to the physical functioning (PF) scale.

After treatment completion, the PH integral point was 51, 5±1, 4 (increased by 7, 7±1, 5). The most significant improvement was according to the role functioning (RP) (55, 0±8, 9) and BP (54, 9±4, 2) scales. Six months after treatment completion, the PH integral point was 49, 6±1, 2 (still higher than the original by 5, 8±1, 2). The most significant improvement was according to the BP (49, 8±3, 9) and RP (45, 0±9, 2) scales.

Diagram 1 shows that, six months after treatment completion, the average indexes, according to all the scales of the quality-of-life physical element, came down a little bit in comparison to the moment of treatment completion (measuring 1) and stayed much higher than the original (measuring 0). The difference, according to all the scales in all the cases, turned out to be highly significant from a statistical standpoint ($p < 0,0005$).

In the control group (Table 6, Diagram 2), the original PH integral point was 45, 6±1, 5. The lowest index was according to the BP scale (22, 9±3, 5) and the highest was according to the PF scale (46, 0±4, 1). After treatment, the PH integral point was 48, 2±1, 4 (increased by 2, 7±0, 7). The largest progress in this group was according to the BP scale (34, 5±2, 8).

Six months after treatment completion, the average PH integral point equaled 46, 0±1, 2 (almost returned to its original value—difference of 0, 5±1, 0). Analysis of the dynamics according to different scales showed there was a moderate positive difference from the original level according to the RP scale (15, 0± 5, 9). According to the BP scale, it was still higher than the original as well (by 13,9± 2,7). According to PF scale, the average point turned out to be lower than the original.

The differences, according to all the scales in all the cases, proved to be highly significant from a statistical

standpoint ($p < 0,0005$) in this group. The dynamics of the quality-of-life physical element indexes in the control group are shown in Diagram 2. Average indexes, according to the majority of scales after six months, tend to return to close to the original value (measuring zero).

Quality-of-life mental element

The integral point, according to the scales of the quality-of-life mental element (MH) in the index group (Table 7, Diagram 3), originally equaled $26, 8 \pm 1, 8$. The lowest point was according to role emotional functioning scale (RE) ($13, 3 \pm 4, 4$), and the highest was according to the MH scale ($30, 4 \pm 3, 1$).

After treatment completion, the MH integral point was $39, 9 \pm 1, 6$ (increased by $13, 2 \pm 1, 3$). The most significant improvement was according to the RE scale, which was originally the lowest, but went up by $53, 3 \pm 6,$

3 after treatment. Six months after treatment completion, the average MH integral point was $38, 9 \pm 1, 4$ (still higher than the original by $12, 0 \pm 1, 2$). The largest difference was again according to the RE scale ($- 44, 4 \pm 6, 2$ higher than the original).

Diagram 3 shows that, six months after treatment completion, the average indexes according to all the quality-of-life mental health scales, decreased slightly in comparison to the moment of treatment completion (measuring one) and stayed much higher than the original (measuring zero). The differences, according to all the scales, proved to be highly significant from a statistical standpoint ($p < 0,0005$).

In control group (Table 8, Diagram 4), the original average MH integral point was $30, 2 \pm 1, 3$. The lowest index was according to RE scale ($17, 8 \pm 5, 5$) and the highest according to the MH scale ($38, 1 \pm 1, 9$).

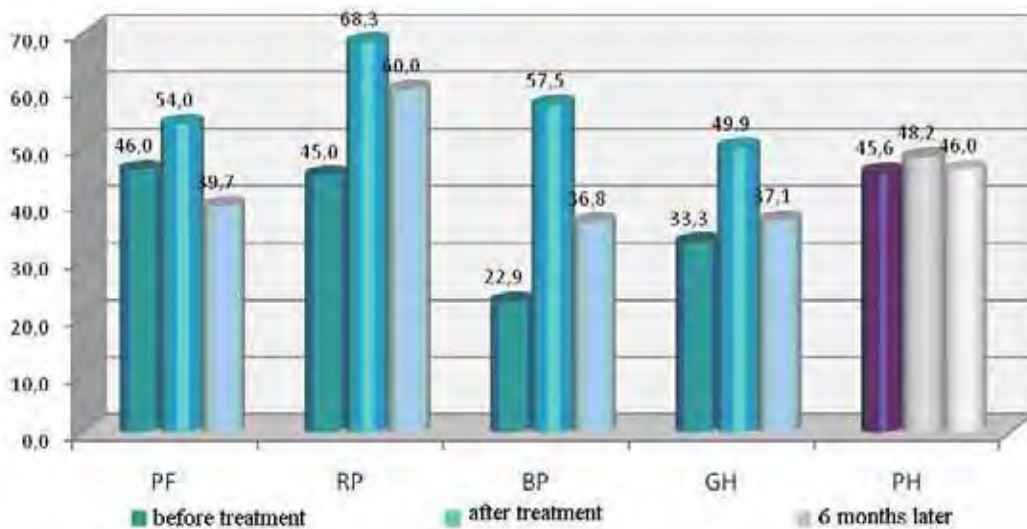


Diagram 2. The dynamics of physical health indexes according to SF-36 health survey—Control group.

	VT	SF	RE	MH	MH
Original (0)	26, 7±	24, 2±	13, 3±	30, 4±	26, 8±
After treatment (1)	53, 7±	55, 8±	66, 7±	52, 3±	39, 9±
Six months later (2)	52, 7±	50, 8±	57, 8±	49, 3±	38, 7±
Δ(1-0)	27, 0±	31, 7±	53, 3±	21, 9±	13, 2±
Δ(2-0)	26, 0±	26, 7±	44, 4±	18, 9±	12, 0±

Table 7. The dynamics of results within the limits of SF-36 health survey testing in the mental health index group.

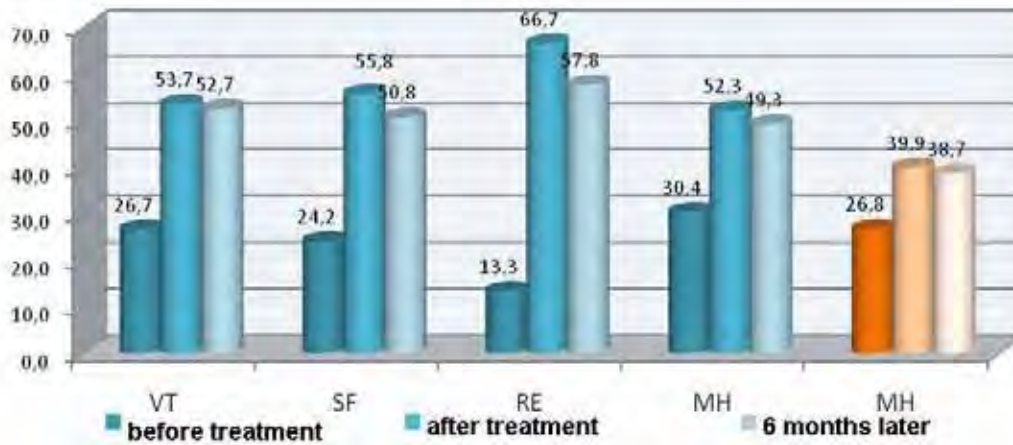


Diagram 3. The dynamics of mental health indexes according to SF-36 survey—Index group.

	VT	SF	RE	MH	MH
Original (0)	34, 3±	31, 7±	17, 8±	38, 1±	30, 2±
After treatment (1)	60, 0±	57, 5±	44, 4±	53, 3±	40, 6±
Six months later (2)	42, 0±	41, 7±	26, 7±	43, 5±	34, 3±
Δ(1-0)	25, 7±	25, 8±	26, 7±	15, 2±	10, 4±
Δ(2-0)	7, 7± 1, 8	10, 0±	8, 9±	5, 3±	4, 2±

Table 8. The dynamics of results within the limits of SF-36 health survey testing in control group (quality-of-life mental element).

After treatment completion, the average MH integral point equaled 40, 6±1, 2 (increased by 10, 4±0, 8). The most significant progress was according to RE scale (increased by 26, 7± 4, 8), the social functioning (SF) scale (increased by 25, 8± 4, 1) and the VT scale (increased by 25, 7± 1, 8).

Six months after treatment completion, the average MH integral point equaled 34, 3±1, 3 (still higher than the original by 4, 2±1, 0). The most marked progress was according to the SF scale (increased by 10, 0± 2, 5).

The differences, according to all the scales, proved to be highly significant from a statistical standpoint ($p < 0,0005$). The dynamics of the quality-of-life psychological element indexes in the control group are shown in Diagram 4.

Results

In both groups, statistically significant improvement

in the quality-of-life indices was registered as a result of the treatment. From a physical health standpoint, the largest progress was according to pain intensity scale, which had the lowest original point. From the viewpoint of mental health, the most considerable progress was according to the emotional role functioning scale, which had the lowest original point as well.

The second testing, conducted six months after treatment completion, showed a statistically significant difference between the current index values, according to most of the scales and the original in both groups. In the index group, they decreased somewhat (measuring one immediately after treatment completion), and stayed considerably higher than the original (measuring zero). In the control group, it was the reverse. Index values, according to most of the scales, went down a considerable amount and tended to approach to the original values.

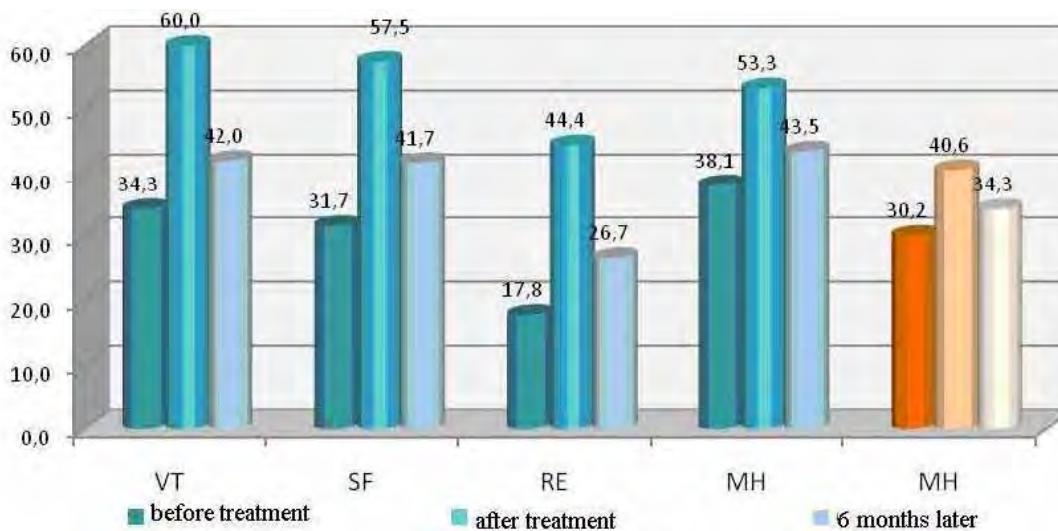


Diagram 4. The dynamics of SF-36 mental health indexes according to the SF-36 survey—Control group.

Conclusions

1. Osteopathic treatment of patients with pain syndromes in the lumbus and lower extremities leads to improvement in the quality-of-life indexes from both a physical and psychological standpoint. The most significant shifts were according to the pain intensity and role emotional functioning scales, both of which originally had the lowest points and, consequently, reflected the parameters which dissatisfied patients most of all.
2. The above-mentioned improvement of QL indexes proved to be stable over the course of time.
3. The patients who received osteopathic treatment enjoyed considerably greater improvement in the QL indexes, according to all the SF-36 health survey scales, in comparison to the patients who were treated with traditional methods. The difference was especially marked according to the physical health scales.

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Further Information

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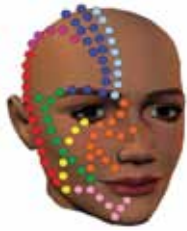
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Progressive Inhibition of Neuromusculoskeletal Structures (PINS)

Orange County Convention Center - Orlando, Florida

October 30, 2011 (Pre-OMED)

Course Description:

This Level I course, developed by Dennis J. Dowling, DO, FAAO, presents a system of diagnosis and treatment in which the osteopathic practitioner locates two related points and sequentially applies inhibitory pressure along a series of related points.

Progressive inhibition of neuromuscular structures (PINS) is a technique that can be included in the osteopathic manipulative treatment repertoire. It relies on knowledge of anatomy and neuromuscular physiologic features, as well as on standard forms of osteopathic palpatory diagnosis and treatment. It is a variant of the inhibition technique that has been taught as an osteopathic manipulative technique for many years, and it bears some resemblance to other manual medicine techniques. The emphasis of the approach is the determination of the alteration of the tissues due to dysfunction, delivering treatment based on palpatory evaluation and patient feedback. Two related points are initially chosen, followed by a progression from one to the other. Relationships to similar techniques will also be discussed. Theoretical as well as selected practical applications will be presented.

Course Times:

Sunday, October 30, 2011 12:00 PM - 6:00 PM

Dennis J. Dowling, DO, FAAO



Dr. Dowling is a 1989 graduate of New York College of Osteopathic Medicine. He specializes in Osteopathic Manipulative Treatment in private practice in Syosset, NY, and is the Director of Manipulation in the Department of Physical Medicine and Rehabilitation at Nassau University Medical Center in Long Island, NY. He is also Director of Osteopathic Manipulative Medicine (OMM) Assessment for the National Board of Osteopathic Medical Examiners Clinical Skills Testing Center. Dr. Dowling is the former Chair of the OMM Department at NYCOM, and a Past President of the AAO. In addition to co-editing *An Osteopathic Approach to Diagnosis and Treatment*, he is a contributor and illustrator for several other textbooks and journals. He frequently lectures throughout the United States and abroad.

Prerequisites:

Basic understanding of functional anatomy

CME:

The program anticipates being approved for **6 hours** of AOA Category 1-A CME credit pending approval by the AOA CCME.

Registration Form		
PINS Course * October 30, 2011		
Name: _____		
Nickname for badge: _____		
Street address: _____ _____		
City: _____	State: _____	Zip: _____
Office phone: _____	Fax: _____	
E-mail: _____		
<i>By releasing your fax/e-mail you have given the AAO permission to send marketing information regarding courses via fax or email.</i>		
AOA#: _____	College/Yr Grad: _____	

Registration Rates	
Registration fee:	\$180.00
<u>AAO accepts checks, Visa, Mastercard or Discover</u>	
Make checks payable to "American Academy of Osteopathy"	
Credit card #: _____	
Cardholder's name: _____	
Expiration date: _____	3-digit CVV#: _____
I hereby authorize the American Academy of Osteopathy® to charge the above credit card for the full course registration amount.	
Signature _____	
American Academy of Osteopathy®	
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Phone: 317/879-1881 • Fax: 317/879-0563	
Register online at www.academyofosteopathy.org	

Cancellation and Refund Policy
The American Academy of Osteopathy reserves the right to cancel an educational program if an insufficient number of physicians pre-register. A sufficient number of registrations must be received 30 days prior to the opening of the course. If you are considering registering for a course less than 30 days prior to the opening, contact the AAO office before making travel plans. In the event of course cancellation due to lack of registrations, all registration money will be refunded. Cancellations from participants received in writing up to 30 days prior to the course opening are subject to withholding of a 20 percent administrative fee, or the participant may transfer 80 percent of their tuition to another educational program to be held within the next 12 months. For cancellations received in writing less than 30 days prior to the course opening, participants may transfer 80 percent of their registration fee to another course to be held within the next 12 months. Registrants who fails to appear for an AAO program can transfer up to 50 percent of their registration fee to another AAO educational program to be held within the next 12 months if a written and signed explanation is received at the AAO office within 10 days of the scheduled course. All other cancellations will receive no refund.

From The Archives

Smith RK. Osteopathic Specialists. In: Webster GV. *Concerning Osteopathy*, revised ed. Carthage, NY: Floyd J. Rich; 1915, 157-164.

One of the most significant chapters in the history of the marvelous growth of Osteopathy is that which chronicles its latest subdivision into the specialties. In the earlier days of the new school, all practitioners were obviously obliged to conduct a general practice, but as their numbers increased, and as educational and clinical facilities became greater, it was natural that some students and physicians, either by deliberate choice or by accident of experience, secured a much greater number of some particular class of cases, or manifested a particular aptitude in some special line of work. This inevitably happens in any school of practice, or, as a matter of fact, in any other walk in modern life.

The ultimate result today has been the development in Osteopathy, as in all other schools of practice, of all the well-defined specialties and the constantly increasing reputation of distinguished authorities in different branches of the work. The rapid increase in the number and size of osteopathic hospitals, clinics, and other institutions and organizations has increased the facilities for teaching the specialties, and has enabled the profession to amass a vast quantity of statistics proving the efficacy of Osteopathy in classes of cases heretofore supposed to have been without the scope of the new school.

The American Osteopathic Association, comprising, as it does, more than half of the entire profession, is a remarkable illustration of the scientific earnestness of osteopathic practitioners. The national organization of no other school of practice has anywhere near such a proportion of its followers as members. The annual conventions of this association illustrate this same point, as fully one-third of the members attend these sessions compared with the one-tenth which attend the conclaves of the national bodies of the other schools of practice. The official journal of the association has attained the height of scientific recognition. It publishes monthly technical papers on the various specialties and also the reports on research work and the results of hospital experience.

Laboratory specialists have produced revolutionary results in their experiments in the A.T. Still Research Institute in Chicago. Dr. John Deason, the superintendent, has succeeded in producing cures in an uninterrupted series of cases of monkeys afflicted with sleeping sickness, and

Dr. Louisa Burns, one of the most eminent osteopathic textbook authors, has announced to the world the discovery of a new disease produced by yeast in the blood. She has also discovered that, by testing the blood pressure, it can be accurately ascertained whether or not any patient is telling the truth.

Perhaps the discovery which has attracted more widespread attention all over the country than any other made in the osteopathic ranks during the past few years has been that of the osteopathic cure for deafness. This development, by Dr. James D. Edwards of St. Louis and Dr. J. Deason of Chicago, is another of those feats of bloodless surgery that were made so famous by Lorenz, the great orthopedic surgeon from Vienna, and Still of Kirksville, MO, the founder of Osteopathy. Instead of burdening the patient with various trumpets and telephones and other external devices to try to make a deaf ear hear, Dr. Edwards went right to the root of the matter and applied his treatment according to the basic principles of Osteopathy itself—that is, to the cause instead of the effect. Without the use of the knife or any surgical instruments, the discoverer of this operation, by means of his fingers alone, explores the back of the throat and the vault between the throat and the nose, breaking down the tiny adhesions that twist the Eustachian tube out of its normal position. By this method, he is able to place the tube in its normal position and to drain it of its accumulation of diseased material so that nature may have an opportunity to effect a cure. Under the instruction of Dr. Edwards, osteopaths all over the country have learned this method. It is applicable only to catarrhal deafness. The cure of hay fever, by somewhat analogous methods, is the latest triumph in the achievements of Dr. Edwards.

“The Osteopathic Lorenz” is the title which has been freely given to Dr. George Laughlin, professor of orthopedic surgery, at the American School of Osteopathy and osteopathic surgeon to the hospital at Kirksville, MO. For years, Dr. Laughlin has been performing an enormous number of orthopedic operations, particularly for the condition that the famous surgeon from Vienna came to this country to operate upon, namely congenital dislocation of the hip. In the middle west, they have so recognized the superiority of Dr. Laughlin’s procedure over that of Lorenz that they have named his modification of the Viennese procedure “The Laughlin Operation.” Dr. Laughlin’s

modification of the famous Abbott operation for flexed lateral curvature of the spine has attracted great interest in surgical circles in the west. In both of these serious and important operations, Dr. Laughlin utilizes the osteopathic principles of bloodless surgery to such an extent that the elements of pain and danger are greatly lessened and the possibilities of benefit much increased.

On the Pacific coast, Dr. Otis F. Akin is duplicating the great work done by Dr. Laughlin. Dr. Akin has had experience in all of the great clinics in this country and Europe, and has had the advantage of personal contact with the masters of orthopedic surgery in other lands. He worked with Dr. Abbott of Portland and has become adept in the application of the latter's method in the treatment of spinal curvature. Among Dr. Akin's triumphs has been his success with the wonderful new operation for tuberculosis of the spine, by means of which complete recovery is effected within a few weeks, instead of a few years as by the old-fashioned procedure.

In the east, among those who have been conspicuous in the success of their achievements in the specialty of orthopedic surgery, may be mentioned Dr. E.M. Downing of York, PA, and Dr. Ralph Williams of Rochester, NY, both of whom have accomplished wonderful things with their modification of the Abbott operation.

In general surgery, it is probably safe to say that no man in any school of practice has ever made a more brilliant rise than Dr. George A. Still, surgeon-in-chief of the hospital of the American School of Osteopathy in Kirksville, MO. Few surgeons in this country perform more operations during the year than does Dr. Still, whose patients are sent to him by osteopathic practitioners located throughout the middle west.

One of the specialties that has made the most phenomenal progress in osteopathic circles during the past year is that of mental diseases. At Macon, MO, there a large institution has been established for the exclusive treatment of mental cases by the osteopathic methods. Under the superintendency of Dr. Arthur Hildreth, one of the pioneers in the profession, and under the technical direction of Dr. L. Von Horn Gerdine, professor of nervous and mental disease at the American School of Osteopathy, the startling discovery has been made that a number of supposedly incurable mental diseases are cured by osteopathic treatment.

In Los Angeles, the latest word seems to have been spoken in the cooperation of specialists among Osteopaths, as eight practitioners, each with an exclusive specialty, have opened a cooperative establishment where they all work together. The several specialties included in this

osteopathic institution are women's and children's diseases, skin diseases, surgery, eye, ear, nose and throat, dentistry, mental and nervous diseases, x-ray and other laboratory diagnoses. The specialists associated together in this work are Dr. Merritt M. Ring, Dr. Edward Strong Merrill, Dr. W. Curtis Brigham, Dr. Walter B. Goodfellow, Dr. Carl H. Phinney, Dr. Herman E. Beckwith, Dr. H. Brenton Brigham and Dr. J. Wesley Scott.

The surprising interest of the public in the so-called "twilight sleep" shows the tendency to revolt from the traditional methods. In no line of osteopathic work is there more amazement at results than in obstetrical work. Dr. Charles Still, son of the founder of Osteopathy, and Dr. M. E. Clark of Indianapolis, IN, are two of the men who have attained the greatest reputation in this specialty, although there are hundreds of general practitioners who have accomplished splendid things in this work.

"Better babies" by the hundreds are the result of the splendid work done by Dr. Jenette Bolles of Denver, Dr. Roberta Wimer-Ford of Seattle and a number of other noble osteopathic practitioners who are devoting their lives to the specialty of children's diseases and the campaign for the betterment of conditions for both mothers and infants. Tic doloureux is the latest disease conquered in the progress of Osteopathy. Dr. Christopher D. Thore of Boston recently discovered an entirely new cause for this painful and intractable condition, and demonstrated the simplest osteopathic method of removing it.

Dr. Frank Farmer of Chicago, director of the case record department of the American Academy of Osteopathic Research, has attained national fame as a diagnostician. Dr. Carl P. McConnell of Chicago, one of the pioneer osteopathic specialists, continues to be known as a master of technique. Dr. H. A. Redfield of Fairmont, MN, is known all over the country in this school of practice as an expert oculist.

The campaign against the great white plague receives added impetus by the work of Dr. W.B. Meacham of Asheville, NC, who has demonstrated conclusively that there is a distinct relation between vertebral irregularities and pulmonary tuberculosis. Dr. Meacham has also proven that the adjustment of these bones may, in some cases, materially assist the process of recovery.

Dr. Percy Woodall's textbook on gynecology is an evidence of his standing in his specialty. Dr. Dain L. Tasker of Los Angeles has a monument to his reputation in the form of his text-book on the *Principles of Osteopathy*.

Dr. Charles Hazzard of New York City will always be looked up to by his former students because of the prestige of his book on *Osteopathic Practice*. Dr. Charles Teall of

Fulton, NY, is known to the profession as an authority on displacements of the innominate bone. Dr. E.E. Tucker of New York City has, for several years, devoted his attention to the ductless glands.

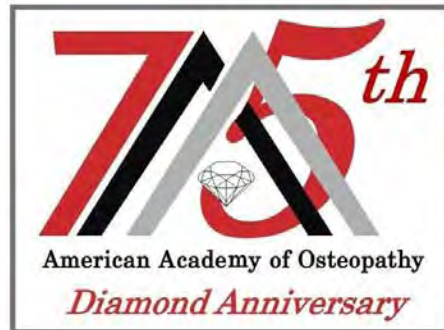
It is impossible within the limits of this chapter to include the names of many practitioners who are entirely deserving of mention, as there are scores of osteopathic physicians and surgeons who have been modestly

pursuing particular lines of research, not only to their own advantage, but to the distinct advancement of their profession and the lasting benefit of humanity.

EDITOR'S NOTE: The author of the foregoing omitted any reference to himself, but I cannot refrain from stating that Dr. Smith is one of the best known orthopedic surgeons in the osteopathic school and has devoted much study to this special branch of practice.

MARK YOUR CALENDARS!

March 21-25, 2012
2012 Annual Convocation
Join us in celebrating our



The Unified Osteopathic Field Theory
Kenneth J. Lossing, DO, Program Chair

Come to Louisville and join us in learning the most recent advances and updates in the science, art and practice of osteopathy! More than 130 years ago, Dr. Still discovered there was a relationship between mechanical tension and health. It took modern science another 100 years to find out why this is true. We now know that mechanotransduction affects genetic regulation. The cells are affected by, and respond to, their environment. The extracellular matrix is connected to the cellular adhesion molecules, microtubules and microfilaments, and the nucleus. Genetic regulation affects fluid and nutritional exchange, cell health and programmed cell death. This opens the vision of osteopathic approaches to nearly all anatomical structures: arteries, nerves, viscera, bones, vertebral discs and many others.

All of the body's systems are partners; they interact. As physicians, we are partners with our patients to help find their greatest health. We will also share the newest updates in biomechanics, counterstrain, cranial (the brain), Still technique, myofascial chains, exercise, light therapy, scoliosis and HVLA.

Visceral Approach for the Sacrum and Pelvis

December 9-11, 2011 at Western University/COMP in Pomona, CA

[**Note:** Due to overwhelming response at the March 2010 pre-Convocation course, Dr. Lossing has agreed to repeat this course for the AAO membership.]

Course Description:

This course will look at the most common medical and osteopathic problems in the sacrum and pelvis from a visceral osteopathic perspective. It will explore medical and osteopathic conditions such as coccygodynia, dyspareunia, menstrual irregularity, infertility, uterine fibroids, chronic low back pain, sacral fractures, stress incontinence, benign prostatic hypertrophy, chronic prostatitis, pelvic pain and pelvic floor dysfunction. During the course, participants will palpate, diagnose and treat fascial chains from the feet to the pelvis, the coccyx, the sacrum (including sacral fractures), sacral ligaments, pelvic floor muscles, the lymphatics of the pelvis and its organs, the prostate, cervix, fallopian tubes, ovaries, and bladder. **Internal exams and treatment will be taught where appropriate.**

Course Location:

Western University of Health Sciences
309 E. Second Street
Pomona, CA 91766
(909) 469-5505
www.westernu.edu

Kenneth J. Lossing, DO, Presenter

Dr. Lossing is a 1994 graduate of Kirksville College of Osteopathic Medicine. He completed internship and residency programs at Ohio University College of Osteopathic Medicine, and is certified by the American Osteopathic Board of Neuromusculoskeletal Medicine and the American Osteopathic Board of Family Physicians. Dr. Lossing studied under French osteopath Jean-Pierre Barral, DO, and is known internationally as a lecturer on visceral manipulation. He is currently in private practice in San Rafael, CA.



Except for acting as the 2012 AAO Convocation Program Chair in Louisville, KY, Dr. Lossing has decided to take a sabbatical from teaching in 2012. Visceral Approach to the Sacrum and Pelvis is the last AAO course Dr. Lossing will teach until 2013. Mark your calendars now and do not miss this opportunity!

CME:

The program anticipates being approved for 24 hours of AOA Category 1-A CME credit pending approval by the AOA CCME.

Cancellation and Refund Policy:

The American Academy of Osteopathy reserves the right to cancel an educational program if an insufficient number of physicians register. Sufficient registrations must be received 30 days prior to the opening of the course. If you are considering registering for a course less than 30 days prior to the opening, contact the Academy office before making travel plans. In the event of course cancellation due to lack of registrations, all registration money will be refunded. Cancellations from participants received in writing up to 30 days prior to the course opening are subject to withholding of a 20 percent administrative fee, or registrants may transfer 80 percent of their tuition to another educational program to be held within the next 12 months. For cancellations received in writing less than 30 days prior to the course opening, registrants may transfer 80 percent of their registration fee to another course to be held within the next 12 months. Registrants who fail to appear for an AAO program can transfer up to 50 percent of their registration fee to another AAO educational program to be held within the next 12 months if a written and signed explanation is received at the AAO office within 10 days of the scheduled course. All other cancellations will receive no refund or transfer of registration fees.

Registration Form

Visceral Approach for the Sacrum and Pelvis December 9-11, 2011

Name: _____

Nickname for Badge: _____

Street Address: _____

City: _____ State: ____ Zip: _____

Phone: _____ Fax: _____

E-mail: _____

By releasing your fax/e-mail, you have given the AAO permission to send marketing information regarding courses to your fax or e-mail.

AOA#: _____

I require a vegetarian meal

(The AAO makes every attempt to provide meals/snacks that meet participants' needs but cannot guarantee to satisfy all requests.)

Registration Rates

	<u>On or before 11/9/2011</u>	<u>After 11/9/2011</u>
AAO member	\$ 960.00	\$1,060.00
Non-member	\$1,060.00	\$1,160.00

The AAO accepts Check, Visa, Mastercard or Discover

Credit Card #: _____

Cardholder's Name: _____

Expiration Date: _____ 3-digit CVV# _____

I hereby authorize the American Academy of Osteopathy® to charge the above credit card for the full course registration amount.

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Register online at www.academyofosteopathy.org

Spondylogenic-cranial biomechanic disorders in patients with chronic cerebrovascular insufficiency in the vertebrobasilar basin and their osteopathic correction

S.V. Novoseltsev, DO

Abstract

Spondylogenic-cranial biomechanic disorders play a significant role in pathogenesis of chronic vertebrobasilar insufficiency. A principal regimen for osteopathic treatment of this pathology is suggested, taking into account the peculiarities of clinical picture of vertebrobasilar insufficiency in different age groups and polymorphism of osteopathic findings. Confident improvement of the clinical picture of vertebrobasilar insufficiency and hemodynamic indices of cerebral circulation in the vertebrobasilar basin is observed after correction of spondylogenic-cranial biomechanic disorders.

Introduction

According to World Health Organization definition, vertebrobasilar insufficiency (VBI) is a reversible disturbance of brain function caused by a decrease of the blood supply in the region fed by the vertebral and basilar arteries.

Studying new approaches in the treatment of vertebrobasilar insufficiency is urgent, not only because of the extreme prevalence in both children and adults, but also because up to 30 percent of all strokes and approximately 70 percent of transient ischemic attacks (TIA) occur in the vertebrobasilar basin (VBB).

With respect to localization, the causes of vertebrobasilar insufficiency may be both intracranial and extracranial lesions of vessels (stenosis, occlusion, thrombosis). Lesions of extracranial regions of the vertebral arteries (sinuosity, flexure, compression) are observed in 65 percent of cases.^{1,2,3} Etiology of VBI is diverse, but different biomechanic disorders in the organism may play a significant role in the development and maintenance of this vascular pathology.

Literature Review

At present, the literature insufficiently covers the connections between cerebral vascular pathology and disorders in the biomechanics of the organism as a whole.

The greatest results in this field are achieved by studying the connection between the mechanics of the cervical spine and disturbances of cerebral circulation in the vertebrobasilar basin.^{4,5,6,7} In spite of this, the role of the craniosacral system and body fascias in the formation and maintenance of chronic cerebrovascular insufficiency in the VBB has not been sufficiently studied.⁸

It is important to attempt to comprehend the possible causes of vascular disorders in the VBB in connection with disturbance of biomechanical balance, not only at the level of the cervical spine but mainly the craniosacral system from the viewpoint of the osteopathic specialist. Insufficient attention has been paid to this aspect of pathogenesis until now.

The effectiveness of manual therapeutic approaches has already been noted by some authors.^{7,8,9,10,11,12,13} The complex character of circulation, in which both extra- and intracranial mechanisms take place, is taken into account. But, despite many years of experience in the manual treatment of vertebrobasilar insufficiency syndrome, it should be noted that the possibilities of this therapeutic method have not been fully explored.

The high occurrence of vertebrobasilar insufficiency (VBI) in the form of structural cerebral circulation disturbances, the insufficient effectiveness of pharmacotherapy and surgical treatment and insufficient attention to biomechanical aspects in the pathogenesis of vertebrobasilar insufficiency, further the urgency of improving biomechanical correction method of VBI with the help of osteopathic correction techniques.

Research Objectives

The objective of this study was to improve the effectiveness of treatment of chronic vertebrobasilar insufficiency. In particular, the study aimed to reveal the significance of spondylogenic-cranial biomechanic disorders in patients suffering from vertebrobasilar insufficiency syndrome; determine a therapeutic algorithm for chronic vertebrobasilar vascular insufficiency in this

category of patients; and assess the effectiveness of osteopathic methods in the treatment of vertebrobasilar insufficiency.

Research Methods

To this end, 164 patients with VBI were examined. Of these patients, 83 were female and 81 were male. The age of the patients examined ranged from zero to 45 years. The duration of the disease (verified vertebrobasilar insufficiency syndrome) ranged from three weeks to 17 years. Approximately one third of the patients (33%) had vertebrobasilar insufficiency syndrome with rather frequent exacerbations, i.e., every six to seven months. These patients ranged in age from 19 to 45 years. Most patients of working age had sedentary professions, such as programmers, economists and cashiers.

During the study, a complex examination of the patients was performed, which included a collection of anamnesis and an analysis of the results; a neurological investigation; and manual testing of the craniosacral, musculoskeletal and visceral systems. The instruments used in this methodology included ultrasound dopplerography of the head and cervical vessels, roentgenological investigation of the cervical spine with functional tests, electroencephalography (selectively) and magnetic resonance imaging in vascular mode (selectively).

Results

The results of the roentgenological investigation revealed disorders of kinetics in the cervical vertebral-motor segments in all patients. Flattened cervical physiological lordosis was the second most frequent disorder in all age groups. Lowered height of intervertebral discs prevailed in the 31 to 45 years age group (41.67 percent). Cervical ribs and Kimmerle anomaly were revealed in 25 percent of cases in the first two groups. They were rarer in the third group (16.67 percent). Roentgenological changes were noted more often in women than in men.

Lowered linear blood velocity (LBV) in the right vertebral artery was observed most often (in 59.15 percent) in the dopplerography findings. Spasm of the basilar artery and a lowered LBV in the right posteriorcerebral artery were often revealed as well. Difficulty in venous outflow in the left jugular (in 54.27 percent) and the right vertebral vein (in 64.02 percent) also attracts attention. Most patients with vertebrobasilar insufficiency syndrome had dyscirculatory disorders of cerebral hemodynamics of the parasympathicotonic type (in 73.78 percent).

Analysis of the findings by age and sex revealed hemodynamic disturbances in the a. carotis basin in 60 percent of cases in all age groups and a lowering of LBV in the right vertebral artery by less than 40 percent in the first and second age groups (in 27.96 percent and 30.43 percent, respectively). Patients in the third group more often experienced a lowering of LBV by less than 50 percent (in 31.25 percent). A lowering of LBV in the basilar artery was maximum in the second age group (65.22 percent) and increase in LBV was maximum in the first age group (64.52 percent). Disturbance of hemodynamics in the right posterior cerebral artery prevailed in practically all groups. A lowering of LBV in the right vertebral artery was observed in 60.49 percent of the male patients and in 57.8 percent of the female patients. A lowering of LBV in the basilar artery prevailed in women (37.35 percent) and an increase in LBV dominated in men (48.15%). EEG revealed irritation in brainstem structures in all age groups. The difference by sex was not noted. Paroxysmal activity was observed most often in the first age group (11.83 percent).

According to MRI, the change of physiological lordosis in the cervical spine increases with age. These changes were revealed most often in the second age group (92.31 percent). In this age group—as in the most able-bodied one—a change in cervical physiologic lordosis may be connected with increased physical loads. Degenerative lesions in the joints, discs and ligaments in the cervical spine were observed already in teenagers and, on the whole,

Number of patients	Age in years			Sex	
	0 -18	19 - 30	31 - 45	Male	Female
164 (100%)	93 (56.6%)	23 (14.2.%)	48 (29.2%)	81 (49.4%)	83 (50.6%)

Table 1. Distribution of examined patients by age and sex.

Value		% before treatment	% after treatment	X2	P
Lowering of LBV in right vertebral artery	By less than 30%	6.71	100	87.03	<0.001
	By less than 40%	28.66	0		
	By less than 50%	23.78	0		
Lowering of LBV in left vertebral artery	By less than 30%	4.27	100	91.64	<0.001
	By less than 40%	16.46	0		
	By less than 50%	10.37	0		
Lowering of LBV in basilar artery		35.37	6.1	149.57	<0.001
Increase of LBV in basilar artery		43.29	1.83	119.11	<0.001
Disturbed blood flow in posterior cerebral artery	Left	14.63	2.43	94.22	<0.001
	Right and left	21.95	0		
	Right	22.56	0		
Difficulty in venous outflow in v.vertebralis	On the left side	33.54	0.48	21760.62	<0.001
	On the right side	64.02	0.21		

Table 2. Confidence of differences by criterion X2 before and after the treatment (ultrasound dopplerography of head and cervical vessels).

were evident in 21.74 percent of cases in the first age group (zero to 18 years). The rate of degenerative lesions in the cervical spine increases with age and reaches 75 percent of cases by the age of 31 to 45 years. Herniation in the cervical spine in patients with vertebrobasilar insufficiency syndrome was rarely observed. According to MRI findings, this phenomenon was noted in only 4.41 percent of the patients.

The findings of the complex examination of 164 patients made it possible to distinguish the following main vertebrobasilar insufficiency syndromes: vestibulocerebellar syndrome (in 75.38 percent), visual disorders (in 29.27 percent), cochleovestibular syndrome (in 53.05 percent), asthenoneurotic syndrome (in 48.78 percent) and cervicocranialgia (in 74.39 percent).

The manual (osteopathic) examination included the following systems: the craniosacral system (sphenobasilar synchondrosis, sacral bone); the cervical, thoracic and lumbar spine; the pelvic bones; the first ribs and clavicles, diaphragm and pelvic diaphragm; and the visceral system.

Findings of examination of the craniosacral system allowed the author to draw the following conclusions:

Among the cranial dysfunctions in patients with vertebrobasilar insufficiency, torsion of sphenobasilar synchondrosis (SBS) was most common (right torsion in 44 patients, left torsion in 29 patients). Lateroflexion with rotation (right lateroflexion in 11 patients, left lateroflexion in 25 patients) was observed much more rarely. The distribution of SBS dysfunction by age group is also of interest. Right lateroflexion with rotation of SBS (in 7.53 percent) and lateral displacement of the sphenoid to the right (in 13.98 percent) was observed in the first group more often than in the other two groups. Left lateroflexion with rotation of SBS (in 17.39 percent) and lateral displacement of the sphenoid to the left (in 26.09 percent) was revealed in the second age group more often than in the first and third age groups. Right torsion of SBS (33.33 percent) prevailed in the third age group. Vertical displacements of the sphenoid were only noted in six patients (3.65 percent). The research did not reveal asynchronism of the primary respiratory mechanism (PRM) at the level of the skull and sacral bone—rhythm was six cycles per minute and of low amplitude and intensity. This may be considered compression of SBS. When investigating the mobility of the sacral bone, sacral bone extension was revealed most often (in 93 subjects).

Findings of the manual examination of the structural system (vertebral column, ribs, clavicles, pelvic bones) and diaphragms revealed the following kinetic dysfunctions in patients with VBI syndrome: Dysfunction of C0-C1 was observed in 135 patients (82.32 percent) and vertebral-motor segments C3-C4 in 95 patients (57.93 percent). Functional blocks of the lumbar vertebrae were observed in 141 patients (85.98 percent). Anterior rotation of the iliac bone on the right side was revealed in 90 patients (54.88 percent). One should also note dysfunctions of the first rib on the left side, which was observed in 86 patients (52.44 percent), and dysfunctions of the diaphragm and pelvic diaphragm on the right side in 117 patients (71.34 percent) and 85 patients (51.83 percent), respectively.

The zero to 18 years age group is characterized by the following structures being affected most often: C0-C1 (74.19 percent), C3-C4 (48.39 percent), the lumbar vertebral-motor segments (82.80 percent), anterior rotation of the right iliac bone (53.76 percent), left torsion of the sacral bone along the left axis (10.75 percent). The latter dysfunction was almost not noticeable in the 19 to 30 years age group but appeared in the 31 to 45 years age group (8.64 percent). One should note dysfunctions of the first rib on the left side and of the diaphragms on the right side, which were observed rather often in the first age group.

Analysis of findings of the osteopathic examination 19 to 30 years age group revealed the following peculiarities: dysfunctions of C0-C1 in the overwhelming

Syndrome	Before treatment %	After treatment %	Value of X ²	P
1. Vestibulocerebellar	75.38	18.2	219.61	<0.001
2. Visual disorders	29.27	9.15	44.24	<0.001
3. Cochleovestibular	53.05	1.83	1460.24	<0.001
4. Asthenoneurotic	48.78	3.65	579.14	<0.001
5. Cervicocranialgia	74.39	1.22	444.60	<0.001

Table 3. Dynamics of main syndromes of vertebrobasilar insufficiency before and after treatment (differences are confident by criterion X²).

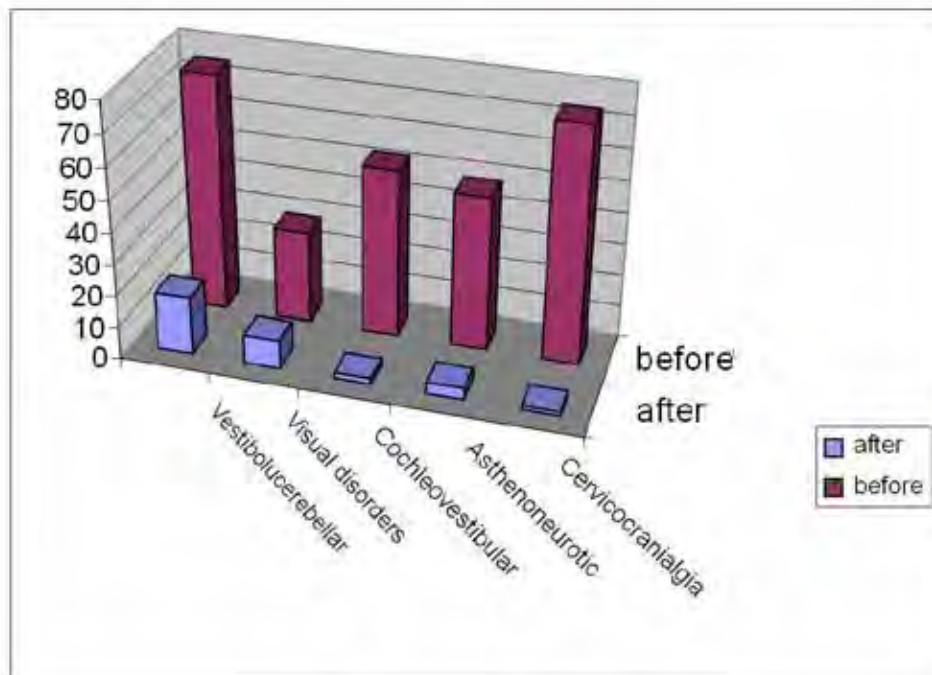


Fig. 1. Dynamics of main VBI syndromes before and after treatment (differences are confident by criterion X², p<0.001).

Parameter	Before treatment		After treatment		X ²	P	
	n	%	n	%			
Right torsion of SBS	44	26.8	5	3.05	575.78	<0.001	
Left torsion of SBS	29	17.68	3	1.83			
Lateroflexion with SBS rotation on right side	11	6.71	1	0.61			
Lateroflexion with SBS rotation on left side	25	15.24	4	2.44			
No SBS dysfunctions	3	1.83	134	81.71			
Cranial rhythm of PRM	5	22	13.41	0	388.86	<0.001	
	6	70	42.68	8			4.88
	7	46	28.05	15			9.15
	8	25	15.24	139			84.76
Flexion of sacral bone	71	43.29	110	67.07	25.60	<0.001	
Extension of sacral bone	93	56.71	54	32.93			
Sacral rhythm of PRM	5	25	15.24	0	405.72	<0.001	
	6	67	40.85	7			4.27
	7	51	31.10	20			12.19
	8	18	10.98	137			83.54

Table 4. Dynamics of main kinetic dysfunctions of the spheno-basilar synchondrosis in the patients with VBI before and after treatment (differences are confident by criterion X², p<0.001).

majority of cases (95.65 percent) and an increased rate of dysfunctions of the vertebral-motor segments C1-C2 (56.52 percent). The portion of dysfunctions in vertebral-motor segments C3-C4 and C4-C5 was also high (78.26 percent and 73.91 percent, respectively). Almost all patients had functional blocks of the lumbar vertebral-motor segments (95.65 percent). The increased rate of functional blocks in the thoracic spine (73.91 percent) attracts attention. Compared to the first and third age group, the second age group showed a prevalence of anterior rotation of the iliac bone on the left side (in 47.83 percent) and posterosuperior dysfunctions of the symphysis pubis on the left side (in 17.39 percent). The rate of right torsion of the sacral bone along the left axis was also increased (in 17.39 percent).

The 31 to 45 years age group often showed dysfunction of C0-C1 (in 91.67 percent), but a lowering of the C1-C2, C3-C4 and C4-C5 dysfunction rates was clearly observed, although dysfunction of C4-C5 was revealed in about 50 percent of cases. It is also without doubt that functional dysfunctions of vertebral-motor segments C-C7 and C7-Th1 were significantly higher in this age group than those in previous two age groups (22.92 percent and 20.83 percent, respectively). The rate of functional blocks in the lumbar vertebral-motor segments and the right iliac bone in anterior rotation is high. It should be mentioned that rate of right sacral bone torsions along the left axis (in 14.58 percent) steadily increases with age. It is possible to suppose, hypothetically, that this is connected with

trauma of the lumbar spine. Dysfunctions of the clavicle in abduction on the left side (in 16.67 percent of patients) was observed only in the third age group.

Analysis of the findings of osteopathic testing of the visceral system revealed the following results: kinetic dysfunctions of the liver and right kidney occurred most often (in 56.71 percent of patients), with kinetic dysfunctions of the left kidney and stomach at a lesser rate (in 21.34 percent and 22.56 percent, respectively). These dysfunctions prevailed in all age groups. It should be mentioned that, in the second and the third age groups, uterus dysfunctions were observed in 21.74 percent of patients and 27.08 percent of patients, respectively.

Based on these results, the following regimen for osteopathic treatment of vertebrobasilar insufficiency syndrome may be suggested: recovering mobility of the sacral bone in sacroiliac articulations L5-S1; eliminating dysfunctions of the pelvic diaphragm, diaphragm and superior thoracic aperture; eliminating dysfunctions of the cervical spine, especially levels C₀-C₁, balancing the deep cervical fascias; eliminating dysfunctions of the sphenobasilar synchondrosis, correcting the sutures of the skull base (occipitomastoid, petro-jugular and petro-basilar sutures); inhibition of the superior and cervical sympathetic ganglion; and drainage of venous sinuses.

After the complex investigation and osteopathic treatment of 164 patients was performed, the results were assessed and are presented in Table 1. The effectiveness of osteopathic correction of vertebrobasilar insufficiency syndrome was assessed in 164 patients by calculating the coefficient of agreement (X²) before and after the treatment using the following parameters: complaints, ultrasound dopplerography, the main syndromes of VBI and the main dysfunctions of SBS.

After osteopathic treatment of 164 patients was performed, a significant decrease in complaints was observed, including the complete disappearance of headache (X²=55.34; p<0.001), pain in the cervical spine (X²=16.19; p<0.001) and limitation of mobility in the cervical spine (X²=10.05; p<0.001). It also revealed a significant lowering of the dizziness rate, from 53.05 percent to 5 percent (X²=486.037; p<0.001); sleep disorders, from 48.17 percent to 9.15 percent (X²=183.16; p<0.001); attention disturbances, from 39.02 percent to 4.27 percent (X²=295.41; p<0.001); and transient visual disorders, from 17.68 percent to 2.43 percent (X²=98.08; p<0.001).

In the period of one to three years, 84 patients were observed. All returned to their previous professions. Eight patients sometimes had headaches, pains in the cervical

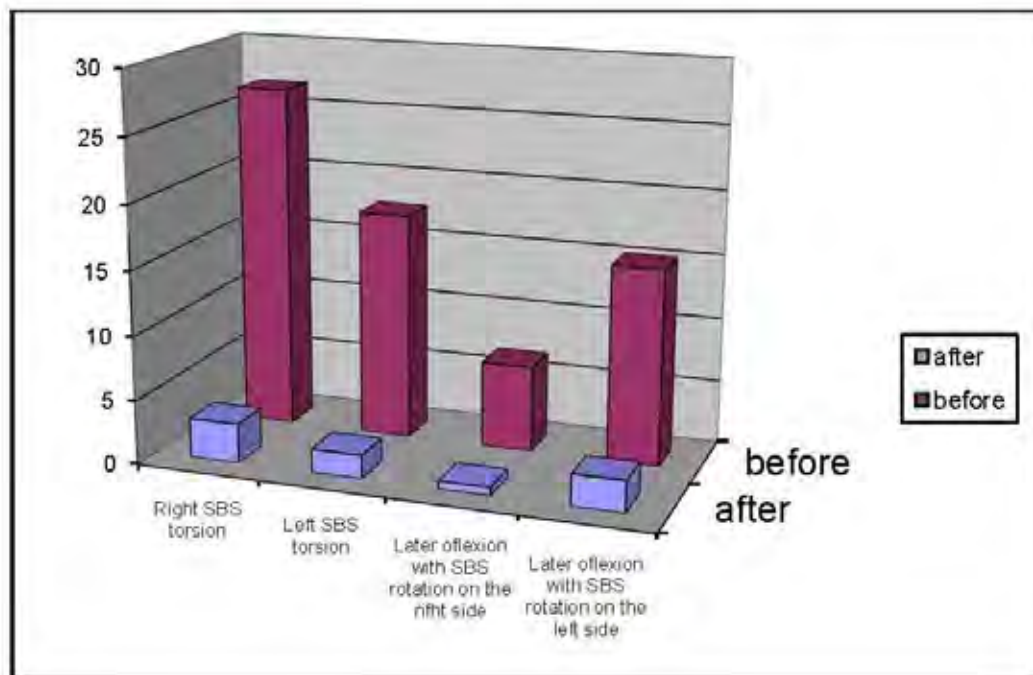


Fig. 2. Dynamics of main sphenobasilar synchondrosis dysfunctions in the patients with vertebrobasilar insufficiency before and after treatment (differences are confident by criterion X², p<0.001).

spine and dizziness, which developed after repeated craniocerebral trauma and was easily relieved after the course of osteopathic treatment.

Conclusions

The following conclusions were drawn based on clinical-instrumental research, osteopathic treatment administered and analysis of the results: Chronic vertebrobasilar insufficiency is mainly manifested by vestibulocerebellar syndromes (in 75.38 percent), cervicranialgia syndromes (in 74.39 percent), cochleovestibular (in 53.05 percent), asthenoneurotic syndromes (in 48.78 percent) and visual disorders (in 29.27 percent). Spondylogenic-cranial biomechanic disorders play a significant role in the pathogenesis of chronic vertebrobasilar insufficiency. A complex investigation is required for diagnosis of vertebrobasilar insufficiency. It should include a clinical neurological examination, an osteopathic examination, ultrasound dopplerography of the head and cervical vessels, a roentgenological investigation of the cervical spine, magnetic-resonance angiography and electroencephalography. Significant improvement of the clinical picture of vertebrobasilar insufficiency and hemodynamic indices of cerebral circulation in the vertebrobasilar basin is observed after recovery from spondylogenic-cranial biomechanic disorders. The maximum effect (98.45 percent) of the manual (osteopathic) treatment was achieved when treating cervicocranialgia, asthenoneurotic and cochleovestibular syndromes of vertebrobasilar insufficiency. Positive neurological and dopplerographical dynamics in the treatment of vestibulocerebellar syndrome and visual disorders was achieved in 73.58 percent of patients.

Practical Recommendations

Patients with chronic vertebrobasilar insufficiency syndrome need, first of all, an osteopathic diagnosis of the cranialsacral system. The results of the study also make it possible to recommend the inclusion of light osteopathic methods in the regimen of therapeutic measures for patients with chronic vascular insufficiency in the vertebrobasilar basin. The use of ultrasound dopplerography is recommended for objective osteopathic treatment of patients with vertebrobasilar insufficiency as well.

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Still-Littlejohn Techniques

January 13 - 15, 2012 at AZCOM

Course Description:

This course is a revised and updated version of a course held in 2007 by the Arizona Academy of Osteopathy, a component society of the AAO. It will review, discuss, demonstrate, compare and practice osteopathic manipulative techniques dating back to the early days of the profession with a clear lineage to Dr. Andrew Taylor Still and other early pioneers, such as Dr. John Martin Littlejohn. The historical and practical context of the techniques demonstrated will be discussed and debated, with reference to contemporary understanding of biomechanics and neurophysiology.

Course Objectives:

- Provide a clear and factual understanding of the history and development of osteopathic manipulative techniques;
- Understand the mechanics of dysfunction and technique in the early phase of the osteopathic profession;
- Review modern versions of A.T. Still's and J.M. Littlejohn's techniques in the context of contemporary developments in basic and clinical sciences;
- Demonstrate and help participants learn specific applications of the Still and Littlejohn Techniques as applied to the spine, pelvis and extremities;
- Enable participants to successfully apply the learned principles and techniques in clinical practice.

CME:

The program anticipates being approved for 20 hours of AOA Category 1-A CME credits by the AOA CCME.

Faculty:

Christian Fossum, DO (Norway), is the Principal of the Nordic Academy of Osteopathy in Oslo, Norway. He has previously held positions at the European School of Osteopathy (Maidstone, UK) and Kirksville College of Osteopathic Medicine. He has taught courses throughout Europe and North America, and has authored numerous articles and book chapters on osteopathic principles and practice. Dr. Fossum is currently enrolled in a doctorate program through the University of Bedfordshire and the British School of Osteopathy in London, UK.

Richard Van Buskirk, DO, PhD, FAAO, a 1987 graduate of West Virginia School of Osteopathic Medicine (WVSOM), is in private practice in Sarasota, FL. Before becoming a student of osteopathic medicine, he held positions in neuroscience and physiology at the University of Wyoming, Hahnman Medical School and WVSOM. Dr. Van Buskirk has taught numerous courses in the United States, Japan and Europe, and has contributed articles to all three editions of the *Foundations of Osteopathic Medicine* textbook.

Course Location:

Arizona College of Osteopathic Medicine
19555 North 59th Avenue
Glendale, AZ 85308
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- Manuscript formatted in Microsoft Word for Windows (.doc), text document format (.txt) or rich text format (.rtf)

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Component Societies and Affiliated Organizations

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Intro to Osteopathic Medicine and Evaluation & Treatment: Thorax and Rib Cage
Faculty: Patricia Murray, DO; George Pasquarello, DO, FFAO
UNECOM, Biddeford, ME
CME: 20 Category 1-A AOA credits anticipated
Phone: (207) 602-2589 Fax: (207) 602-5957
E-mail: cme@une.edu
Web site: www.une.edu/com/cme

September 23 - 25, 2011

Annual ACOFP Intensive Update & Board Review in Osteopathic Family Medicine
InterContinental Chicago O'Hare Hotel, Rosemont, IL
CME: 21 Category 1-A AOA credits anticipated
Phone: (800) 323-0794 Fax: (847) 228-9755
E-mail: joank@acofp.org
Web site: <http://www.acofp.org>

September 29 - 30

Osteopathic International Alliance & Osteopathic European Academic Network Potsdam Conference: Teaching Palpation
Potsdam, Germany
Phone: (312) 202-8196 Fax: (312) 202-8496
Web site: www.oialliance.org
E-mail: jkerr@osteopathic.org

October 7 - 9, 2011

Beyond the Basics: Additional Sutherland Procedures
Course Director: Edna M. Lay, DO, FFAO
MSUCOM, Lansing, MI
Contact: Joy Cunningham
Phone: (509) 469-1520 Fax: (509) 453-1808
E-mail: jcunningham4715@yahoo.com
Web site: <http://www.sctf.com/>

October 12 - 16

American College of Osteopathic Obstetricians & Gynecologists Fall Conference
Hyatt Regency at Penn's Landing, Philadelphia, PA
CME: 27 Category 1-A AOA credits anticipated
Phone: (817) 377-0421 Fax: (817) 377-0439
E-mail: info@acoog.org
Web site: <http://www.acoog.org>

November 2 - 6

Georgia Osteopathic Medical Association Fall CME Conference
Atlanta Marriott at Gwinnett Place, Duluth, GA
CME: 28 Category 1-A AOA credits anticipated
Phone: (678) 225-7571 Fax: (678) 225-7579
E-mail: exdir@goma.org
Web site: <http://www.goma.org>

November 3 - 5

Wisconsin Association of Osteopathic Physicians & Surgeons Annual Fall CME Conference
Milwaukee Clarion Hotel & Conference Center, Milwaukee, WI
CME: 20.5 Category 1-A AOA credits anticipated
Phone: (262) 619-9901 Fax: (262) 619-9902
E-mail: waops1@yahoo.com
Web site: <http://waops.org>

November 5 - 6

Michigan Osteopathic Association 7th Annual Fall CME Seminar
Amway Grand Plaza, Grand Rapids, MI
CME: 12 Category 1-A AOA credits anticipated
Phone: (800) 657-1555 Fax: (517) 347-1566
E-mail: moa@mi-osteopathic.org
Web site: www.mi-osteopathic.org

November 11 - 12

Kansas Association of Osteopathic Medicine Annual Mid-Year Conference
Hilton Airport Hotel, Wichita, KS
CME: 18 Category 1-A AOA credits anticipated
Phone: (785) 234-5563 Fax: (785) 234-5564
E-mail: kansasdo@aol.com
Web site: <http://www.kansasdo.org>

November 11 - 13

Intro to Osteopathic Medicine and Evaluation & Treatment: Cervical Spine and Upper Extremities
Faculty: Patricia Murray, DO; George Pasquarello, DO, FFAO
UNECOM, Biddeford, ME
CME: 20 Category 1-A AOA credits anticipated
Phone: (207) 602-2589 Fax: (207) 602-5957
E-mail: cme@une.edu
Web site: www.une.edu/com/cme

November 12 - 13

Arizona Osteopathic Medical Association 31st Annual Fall Seminar
Omni Tuscon National, Tuscon, AZ
CME: 12 Category 1-A AOA credits anticipated
Phone: (602) 266-6699 Fax: (602) 266-1393
E-mail: mweaver@az-oste.org
Web site: <http://www.az-oste.org>

December 2 - 4

Indiana Osteopathic Association 30th Annual Winter Update
Hyatt Regency, Indianapolis, IN
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Web site: <http://www.inosteo.org>