Dear Members,

Although the CNS in Miami is not taking place this year, your Media Committee still wanted to deliver newsletter content for your enjoyment. In this issue, “The COVID Issue,” you will find excerpts on the impact COVID has had on spine patient care and education. There are interviews with SPC Chair Dr. Erica Bisson and Dunsker NREF HYM fund recipient Dr. Jetan Badhiwala. You will learn from educational pieces on craniovertebral junction pathology and superior cluneal neuropathy. Lastly, there are updates from our Payor Response, Rules and Regulations, Nominating, and Peripheral Nerve Committees.

As always, please reach out anytime if you have ideas for the newsletter and Media Committee!

Sincerely,
Khoi D. Than, MD  khoi.than@duke.edu

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Leadership Spotlight with Erica Bisson, MD

Dr. Erica Bisson is Professor of Neurosurgery and Orthopaedics at the University of Utah. She is the program director of the complex spine fellowship and is serving as this year’s AANS/CNS Spine Section Scientific Program Chair. She received her medical school training at Tufts University School of Medicine in Boston, Massachusetts, and completed her neurosurgical training at the University of Vermont. She then went on to complete a fellowship in complex spinal disorders at the University of Utah, under the direction of Dr. Ronald Apfelbaum.

Dr. Bisson specializes in complex spine surgery with a focus on occipitocervical disease, cervical degenerative disorders, advanced spinal fusion techniques, and image-guided surgery.

What excites you most about the 2021 section meeting?

Dr. Bisson: The 2021 meeting, themed “Courage, Resilience, Excellence: Setting the Path,” honors the three groups that represent our past, our present, and our future. By highlighting our mentors and original innovators, today’s leadership, and the budding academicians and surgeons that are our future, I am truly excited to showcase the talent, intellect, and ingenuity that is a hallmark of our profession.

Please share with our members your background and clinical interests.

Dr. Bisson: While I spent my early training in the northeast (medical school at Tufts in Boston, and residency in Vermont), I migrated west
Interview with Dr. Bisson

Continued from page 1

to make Salt Lake City and the University of Utah my home 12 years ago. I have been fortunate to work with amazing and collaborative colleagues in a department with a strong leader. With these, I have flourished in my career, focused on occipitocervical disorders and outcomes research.

Are there any mentors who were particularly influential on your career?

Dr. Bisson: Still, nearly weekly, I feel the presence of Ron Apfelbaum, both in the operating room and in clinic. He is a master surgeon, a clear thinker and communicator, and a genuine and compassionate doctor. I remember doing clinic with him— he was always interested in patients’ “stories.” I learned with Ron about the best places to back-country camp and how losing axial rotation sometimes helps a golf game. I also appreciate his expectation of not only understanding every detail of a patient’s clinical history and imaging findings, but his pushing both his trainees and himself to perform optimally for the benefit of his patients. As I train our future surgeons, I often channel my inner Ron to help them remember what a privilege and honor it is to practice spinal neurosurgery.

What does the section mean to you and what do you enjoy most about being a leader within the section?

Dr. Bisson: In 2 words, comradery and growth. I first got involved with the section as a fellow. I recall walking around the exhibit hall with Ron Apfelbaum stopping every several steps for him to introduce me to his colleagues. I remember thinking that these are the individuals that write the textbooks and author the articles that I was hungry to digest. I was readily welcomed to engage in committees shortly thereafter.

As a young neurosurgeon, the section meetings also offered me the opportunity to introduce myself to potential collaborators. At one of my first meetings as an attending, I approached Shekar Kurpad to discuss his talk on DTI imaging in spinal cord injury. That has led to several years of collaboration with both Shekar and Marjorie Wang.

The section has always promoted strong leaders interested in development of the young, engaged members. There is an appreciation of rewarding hard work and commitment. I remember someone once saying that if you want to be involved, there is no shortage of opportunity. I truly believe this is the case with the section. I have been honored to work through the committee structure to now serve as the Scientific Program Chair for DSPN 2021, with welcomed guidance from past chairs and section leaders along the way.

As a leader in the section, what are your thoughts on ways to increase and promote diversity and inclusion in the section?

Dr. Bisson: This starts from the beginning. I truly believe we need an effort that starts at garnering opportunity and interest in our underrepresented minority (URM) high schoolers and translates to our universities, medical schools, and residents.

Nationally, neurosurgery as an academic specialty lags behind some others in garnering diversity at the faculty level. Only with a concerted effort to draw more URM individuals to our specialty will we achieve goals of equity and inclusion. I often hear that if an individual facing a career decision cannot see themselves in the leaders of the potential career, they are less likely to choose this path. As a section, we need to showcase and promote qualified leaders who can speak to the challenges that face these individuals as well as highlight our own talent.

Malcolm Forbes said “diversity is the art of thinking independently together.” We have many challenges to face as a society, so we need differing views, perspectives, and voices to best define our future. This will only happen by actively promoting diversity in our specialty.
Impact of the COVID-19 pandemic on the practice of spinal surgery

Nader S. Dahdaleh, MD

It has been over seven months since the initial outbreak of the Corona Virus Disease 19 (COVID-19) respiratory illness and over five months since the WHO declared it a pandemic. To date, the widespread involvement of this airborne illness includes 210 countries, has affected over 22,800,000 individuals and claimed the lives of about 800,000. Since the first case was reported in the US in February, the virus has infected more than 5.6 million individuals and caused over 170,000 deaths, reflecting the exponential and multiplicative rate of growth of this illness. When the virus infects the vulnerable—the elderly and those with medical comorbidities—the effects on the respiratory system can be detrimental, requiring hospitalization and, in many instances, ventilatory support for cases of severe pneumonia and acute respiratory distress syndrome. Hospitalization may last for weeks for patients who do not succumb to it. Early efforts to mitigate the effects of this virus were numerous, and in certain regards drastic, including banning travel, shutting down the economy, closing schools, and even a total lockdown. This was primarily done to avoid overwhelming hospital systems, a situation whereby many patients need inpatient hospital care all at once. The so-called “flatten the curve” meant to slow down the rate of new cases such that patients who needed inpatient care could be accommodated. When hospitals are overwhelmed, difficult ethical choices have to be made in regards to who to treat and who not to treat, a sad situation that we have unfortunately witnessed in certain hospitals here and in Europe. Moreover, the cancellation of all elective surgery as well as clinic appointments was done to allow for surge capacity of Covid-19 infected patients. Cancellation of elective surgery preserves the work force—surgeons, nurses, technicians, and resources (namely personal protective equipment)—for those who need them the most.

In the United States, the timing of peak cases differed according to geography as New York, Chicago, Los Angeles, and Seattle were hit hard during the months of March through May, while Florida, Texas, and Phoenix suffered their peak cases later on in July. The common shared denominator was the inevitable cancellation of elective surgery, including spinal surgery, during the 6 to 8 weeks peak period. As we all know, not all spinal surgery is done on elective basis. The possibility of loss of neurological function makes timely intervention needed for some on emergent or urgent bases. The urgent cases posed a decision dilemma to the treating physician, and hence efforts have been made by entities both locally (at the hospital level) and globally (at the societal level) to help guide what constitutes the gray area of urgent surgery in terms of pathology and timing of surgery. There is by no means a consensus statement, but most entities would agree on the following categorization. 1,2

- **Emergent**: Acute cauda equina syndrome due to disk herniation or other causes (tumor, fracture), unstable spinal fracture with a neurological deficit, spinal epidural abscess or hematoma with a neurological deficit, spinal column tumor causing instability and a neurological deficit

- **Urgent**: Rapidly progressive degenerative cervical myelopathy, unstable spinal fracture without a neurological deficit, spinal column tumor causing instability but no neurological deficit

- **Elective**: Degenerative disk disease causing symptomatic cervical or lumbar radiculopathy, spinal stenosis, spondylolisthesis, stable degenerative cervical myelopathy, and primary bony tumors not causing instability or neurological deficit

Since COVID is prevalent in asymptomatic carriers, every patient embarking on an operation must be tested for COVID through a nasopharyngeal swab close to the date of surgery. In patients who test as negative, surgery would proceed as planned. In those who test positive and are embarking on an elective surgery, then surgery is deferred for at least a few weeks until they are retested as negative. In patients who need emergent surgery and are suffering from COVID-19, the decision to proceed may become harder, especially in those who are symptomatic from the virus. In symptomatic patients, the risks of the potential systemic effects of COVID-19 must be weighed against the benefits of surgery. When surgery is performed, maximizing PPE and minimizing personnel in the operating room must be adopted. Moreover, it is recommended to utilize minimally invasive routes and techniques that may expedite patient care and minimize personnel exposure. 3
Impact of the COVID-19 pandemic

The conversion of in-person clinic visits to telemedicine or telephone visits has gained wide adoption and is here to stay. The optionality for patients to choose between in-person or telemedicine visits will continue as the pandemic slows down and hopefully after it ends. However, with that there are challenges that may not be overcome such as the lack of ability of conducting a neurological examination, issues with reimbursement, surgery approval, and even patient satisfaction.

The economic impact of cancellation of elective surgery and spinal surgery in particular cannot be overstated. The loss of a high margin revenue generator to hospitals combined with the complex and lengthy treatment of COVID-19 patients for whom reimbursement is unknown have led to hundreds of millions of dollars in losses. Hundreds of hospitals were forced to furlough innumerable employees and cut the salaries of thousands at a time where healthcare providers are needed the most.

This virus can be beaten. By now we know what can slow it down and possibly eliminate it. It is three simple and basic things: hand washing, wearing a face covering, and social distancing. As a society, if all of us agree to do that then we will win.

References:

“The Virtual Year”
How COVID-19 impacted the 2020 national spine conferences

Ali Baaj, MD

Every year, thousands of neurosurgeons, orthopedic surgeons and other spine specialists attend national conferences to share their clinical and research advances. The COVID-19 pandemic ended that abruptly earlier this year. Traveling restrictions, enacted by both local government and university-hospital employers, left the major surgical societies scrambling to find alternatives to offering their educational content. In some instances, the travel restrictions were implemented just as the meetings were underway, like the 2020 Spine Summit in Las Vegas last March. Other conferences were cancelled just weeks before scheduled to commence, like the AANS annual meeting that was to be held in Boston in April.

As it became apparent that the pandemic was lingering, many organized societies made the decision to go virtual for even their later summer and fall meetings. These included: The NASS 35th annual meeting (scheduled for San Diego in October), SRS 55th annual meeting (scheduled for Phoenix in September) and the CNS annual meeting (scheduled for Miami in September).

Aside from the short and manageable webinars, there had been minimal experience with large-scale virtual, spine conferences. The logistical and technical aspects notwithstanding, ensuring an equivalent educational experience is a challenge. Additionally, the professional networking and social events are difficult to replicate in an online format. There are advantages, however, to the virtual platforms. These include access to a wider audience and the convenience to speakers and participants as they’re able to join from their offices or homes.

As virtual, or at least hybrid, models will likely be the new norm, organizations will need to tackle issues like setting appropriate and tailored registration costs, delineating CME credits, and working with industry on virtual exhibits, just to name a few. It is too early to know what will happen in 2021, but virtual platforms, either in part or full, will remain a key component of the national spine societies’ educational offerings. Investing in personnel and infrastructure in this arena would be prudent.

For updated information on the fall and winter meetings, including official statements from the respective societies, please refer to these websites:
https://www.cns.org/2020-annual-meeting-update
https://www.srs.org/am20
https://www.spine.org/am
As we pass the six month mark grappling with the COVID-19 pandemic as a nation, it is becoming increasingly clear that nearly every industry will be irrevocably changed on a fundamental and operational level. The practice of medicine, and spine surgery in particular, is no different, and we as a subspecialty must reflect on the first six months of the pandemic in order to brace for possibly bigger changes to come.

Several factors have already contributed to major changes in the delivery of spine care. On a hospital level, COVID-19 surges diverted staff and resources away from the operating room and into the intensive care units. Even in areas not experiencing a significant surge, such as our own institution, institutionally-backed work-force “adjustments” have limited the availability of experienced operating room staff by reducing hours and mandating time off in order to offset institutional financial losses. On a patient-level, massive market volatility, record unemployment levels, and the personal and emotional toll of caring for family members sickened with the virus will prevent many patients from seeking, accessing, or affording spine care. Even for patients without these burdens, many may choose to defer elective spine surgery until they can safely enter the hospital setting without fear that they may be exposed to the COVID-19 virus.

Given that ambulatory surgery centers (ASCs) are not involved in COVID-19 response efforts, ASCs that remain available and adequately prepared to prevent the spread of COVID-19 are poised to take on a large volume of cases that are deferred from inpatient centers. For this reason, the ongoing movement of elective spine procedures away from the hospital operating room to the ASC may be further accelerated by the COVID-19 pandemic.

Critical steps will need to be taken in order to ensure the safety of this transition. In order to maintain a high quality of care for spine patients at the ASC, neurosurgeons and ASC staff need to maintain a high degree of vigilance in preventing nosocomial spread of the virus: uninterrupted access to personal protective equipment supply chain, universal preoperative testing within 72 hours of surgery, daily staff screening, strict masking policy for patients and staff at all times, social distancing, and frequent hand hygiene are essential in preventing transmission of the virus in the ASC setting. ASCs, which lack the resources and staffing of larger medical centers, may encounter more difficulty in implementing these policies and procedures. For example, ASCs may lack the equipment needed to recycle and sterilize N95 respirator masks or the testing equipment to perform rapid on-site COVID-19 testing. However, lack of attention in the design or execution of these measures can have dire consequences, as has been seen with the rapid spread of COVID-19 in the nursing home setting across the country.

COVID-19 and Outpatient Spine Surgery

Zachary A. Medress, MD, and Anand Veeravagu, MD
The purpose of the following amendments is to further clarify and elucidate the process of election of members to the DSPN Executive Committee and election of officers within the EC. This will be presented for membership review and voting at the next business meeting.

The revised sections are in Section 4.05 Duties:

9. Election of Executive Committee. It shall be the duty of the immediate past Chairperson of the Joint Section to convene the Nominating Committee each year prior to the CNS Annual Meeting to define a slate of nominees for the Executive Committee of the Joint Section. Nominations for membership on Spine Section EC should be submitted in writing to the Nominating Committee Chair by March 1st each year. Nominations from the SPC and Young Neurosurgeons Committee are encouraged. Self-nominations are also welcome. Nominations should briefly summarize background and explain how a candidate would be a valuable member of Spine Section EC in one to two paragraphs. Nominating Committee will recommend candidates to the incoming Spine Section Chair who will select up to two new members to join the EC. Nominating Committee will also recommend to the incoming Chair which members should rotate off the EC based on performance or completion of duties to the EC. Secretary will be responsible for maintaining performance records of EC members based upon achieving pre-specified goals and turning in committee reports in a timely fashion.

10. Election of Officers. Nominations for Secretary, Treasurer, and Chair Elect should be made in writing to the Nominating Chair by January 1st each year. Self-nominations as well as nominations from EC members are encouraged. Nominations should briefly summarize background and explain why the candidate would be a valuable Officer of the Spine Section EC in one to two paragraphs. This slate of nominees for officers of the Joint Section will be presented to the Executive Committee when the Joint Section Executive Committee convenes at the CNS Annual Meeting. Following Executive Committee approval, the slate of candidates will be presented to the membership in the Joint Section Newsletter. Additional nominations can be made by any active member of the Section and seconded by another active member. Voting on all officer candidates will be conducted at the Annual Business Meeting.

Rules & Regulations Update

Robert Whitmore, MD

Nominating Committee Report

Zoher Ghogawala, MD

The Nominating Committee announced that Dr. Luis Tumialan was selected as the next Secretary of the DSPN. His term will start in March 2021 following the Annual Meeting.
An Interview with Jetan H. Badhiwala, MD PhD
Stewart Dunsker NREF HYM Fund Recipient

Khoi D. Than, MD

Dr. Badhiwala, congratulations on your Dunsker NREF HYM Fund Award and for taking the time to be interviewed for the newsletter. Please tell me a bit about your background.

Dr. Badhiwala: Thank you very much for the opportunity, Dr. Than; it is a real privilege to be featured in the newsletter. I was born and raised in Toronto. I completed medical school at McMaster University in Hamilton in 2014 and thereafter entered the Neurosurgery Residency Training Program at the University of Toronto. During residency, I completed a PhD through the Surgeon Scientist Training Program at the University of Toronto under the mentorship of Dr. Michael G. Fehlings. Currently, I am a PGY-5 resident.

Tell me more about your research.

Dr. Badhiwala: Broadly, my academic interests center on the application of health research methodology, including clinical epidemiological and outcomes research, to delineate best evidence-based practices in neurosurgery, spinal surgery, and neurotrauma. To this end, I have developed experience with a variety of study designs and analytic techniques, including clinical trials. Further, I have an interest in harnessing big data to address clinical knowledge gaps, and in the application of artificial intelligence and machine learning to healthcare data for “personalized” or “precision” medicine. My PhD thesis focused on the topics of acute cervical spinal cord injury and “central cord syndrome.” This work challenged traditional concepts and treatment paradigms for “central cord syndrome,” evaluated the efficacy of early surgical decompression, and ultimately proposed a novel classification system for cervical incomplete spinal cord injury.

Tell me about your research accomplishments.

Dr. Badhiwala: I have authored over 100 peer-reviewed papers, 60 conference abstracts, and 12 book chapters to date. Many of these have been published in general medical journals, such as The Lancet, JAMA, and BMJ, as well as subspecialty journals, such as Neurosurgery, Journal of Neurosurgery, and The Spine Journal. I have been humbled to receive a few honors and awards, including the CIHR Fellowship, CSRS First Place Resident/Fellow Paper, the Warren H. Humanitarian Award, the JANE Award, and the AANS/CNS Spine Section Stewart B. Dunsker NREF HYM Fund Award.

How has the Spine Section supported you in all of this?

Dr. Badhiwala: I have been very fortunate to receive significant support from the Spine Section over the years, and indeed, this has proved instrumental in helping me achieve my goals. The Spine Section provided me with an invaluable platform to

Continued on next page
develop a collaborative network, seek career advice from leading spinal neurosurgeons, and present the findings of my research. Moreover, the Spine Section continues to provide opportunities, such as the current interview, to increase my own visibility within the greater neurosurgery and spinal surgery communities, for which I am eternally grateful. I also owe a debt of gratitude to Dr. Bradley Jacobs and Dr. Alex Ropper, who were great sources of mentorship and guidance as I completed my research under the auspices of the Dunske NREF HYM Fund Award. A list of publications and presentations that have culminated from this award to date are presented below:

Conference Presentations


**Manuscripts**


Advances in the management of disorders affecting the craniovertebral junction

Nader S. Dahdaleh, MD

The craniovertebral junction (CVJ), also known as the upper cervical spine or the craniocervical junction, is defined by the occipital bone, atlas, and axis and their respective joints: the atlantoaxial and atlantooccipital joints. These joints are complex anatomically and biomechanically. More than 50% of neck motion in all planes occurs at the CVJ, and the CVJ accounts for most of the cervical lordosis. The disorders that may affect this junctional region are diverse, and the relative scarcity of empirical evidence, when compared to other regions of the spine, makes management of certain disorders challenging. The first step is an evaluation of the bony anatomy and their relationships. If they are deemed normal, then usually the decision to treat is simple and universal. For example, a simple Chiari malformation type I is treated with a suboccipital and C1 decompression with or without a duraplasty given that the bony morphology and joint relationships are normal. On the other hand, when those anatomic relationships are aberrant, as in conditions of congenital abnormalities of the CVJ (platybasia, basilar invagination, atlas assimilation, Klippel Feil syndrome), chronic fractures, infections, and neoplastic conditions that result in bony destruction, then the decision making and approaches may be more involved and hence are individualized and not universal.

An understanding of the anatomy and biomechanics of the CVJ is essential for sound decision making while managing these disorders, especially the complex ones. The joint orientation of the atlantooccipital joint is “cup like” in the coronal and sagittal planes allowing for flexion and extension with little axial rotation or lateral bending, while that of the atlantoaxial joint is convex allowing for rotation about the
odontoid process, as well as flexion and extension.1 The stability of the CVJ is derived primarily from the ligamentous attachment and, while there are many, three ligaments contribute the most to biomechanical stability of the CVJ: The transverse atlantal ligament which limits flexion and extension of the atlantoaxial joint, the alar ligaments which limit axial rotation and lateral bending at both joint complexes, and the facet capsular ligaments. An example that illustrates the importance of these ligaments in maintaining biomechanical stability of the CVJ is atlantooccipital dissociation: a purely ligamentous injury that renders the CVJ highly unstable. (Figure 1)

An algorithm to treat abnormalities of the CVJ was originally developed by Dr. Arnold Menezes at the University of Iowa in the 1980s. It was based on the location of the compression, and whether the compression was amenable to preoperative reduction with traction. Anterior and posterior abnormalities successfully reduced were treated with dorsal decompression and atlantoaxial or occipitocervical fusion. On the other hand, irreducible abnormalities with ventral encroachment were treated with transoral decompression and subsequent dorsal fusion.2

Over the years, advancements have been made in a fractal fashion but with the ultimate aim of improving patient outcomes and minimizing morbidity, especially of transoral approaches. These advancements were the result of better understanding of the disease processes, appreciation of the biomechanics, utilization of newer imaging modalities, newer instrumentation, and advancement of minimally invasive techniques and technologies regarding ventral approaches.

An example of how understanding the disease process impacts treatment approach is in cases of rheumatoid arthritis. In addition to atlantoaxial instability, patients with rheumatoid arthritis may progress to suffer from ventral compression due to a retro-odontoid pannus or suffer from cranial settling that also may result in ventral cervicomedullary compression. Patients with a retro-odontoid pannus rarely require ventral decompression since the pannus is the result of instability. Hence, it is sufficient to perform a dorsal decompression and fusion as the pannus would resolve subsequently, rarely necessitating a ventral decompression.

A better understanding of the biomechanics is demonstrated in cases of tonsillar ectopia due to Chiari type 1 malformation versus those in the context of atlas assimilation and Klippel Feil. In the former, a simple decompression is adequate, whereas in the latter a decompression will lead to further destabilization of the CVJ and worse outcomes, the reason being that atlantoaxial instability is often present in those patients or may ensue after a standalone decompression. This is explained by the lever arm formed by the occipitalized atlas and the lever arm formed by the autofused spine above and below the joint, which creates a form of adjacent segment disease at the level of the atlantoaxial joint. These conditions are hence treated with a decompression and occipitocervical fusion.

The use of dynamic MR imaging will allow for the evaluation of how flexible the deformity at the CVJ is and whether it may be amenable to preoperative reduction with traction in an effort to obviate anterior decompression. The utilization of preoperative traction is essential and must be used. (Figure 2)

Recently, the utilization of intraoperative muscle relaxation as an adjunct to traction has been used with success in certain cases of basilar invagination and chronic atlantoaxial rotatory subluxation when preoperative bedside traction was deemed insufficient.3,4

More recently, Dr. Atul Goel pioneered the use of atlantoaxial joint spacers for the reduction of cases of basilar invagination or cranial settling.5 Moreover, Dr. Ziya

Figure 2: Sagittal CT of a case of atlanto-axial rotatory subluxation in the setting of Grisel syndrome in an adult (A). Note the realignment after reduction following crown halo traction. (B)
Gokaslan and Dr. Jean Paul Wolinsky utilized intraoperative reduction techniques with both horizontal distraction and vertical compression across the CVJ in order to achieve ventral decompression of the odontoid process in cases of basilar invagination or cranial settling. (Figure 3)

Lastly, for irreducible cases with ventral cervicomедullary encroachment or compression, minimally invasive endoscopically assisted transnasal techniques have been utilized in certain cases to avoid the possible morbidity associated with the transoral route. Moreover, a high cervical retropharyngeal minimally invasive endoscopic resection of the dens has been used with success, adding to the armamentarium of lesser invasive anterior access techniques.  

The past two decades have indeed witnessed significant advancements in the management of disorders affecting the CVJ. It is of paramount importance to share our experiences by reporting them, as many of these disorders are rare and challenging.

References

Effective April 1, 2020, United Health Care issued a Medical Policy Documentation Requirement Update which required images of radiographic studies to be submitted to UHC via a web-based portal in order to obtain pre-certification for surgical treatment of several disorders, specifically surgical treatment for spine pain and total artificial disc replacement for the spine. This requirement also included imaging to be uploaded for knee replacement, endoscopic sinus surgery, balloon sinus ostial dilation, and shoulder replacement, in addition to other procedures.

The policy specifically stated that “specific diagnostic image(s) that show the abnormality for which surgery is being requested, which may include MRI, CT scan, X-ray and or bone scan” be submitted via UHC’s web-based portal. “Consultation with requesting surgeon may be needed to select the optimal images.”

This policy was created with no known input from the medical community and was instituted without forewarning. While this policy became effective on April 1, it was in approximately mid-May when this policy started to be enforced at the provider level. Once instituted, this policy required that the surgeon or their office staff locate the “pertinent” images in order to obtain approval. For a spinal surgery, this would most often include, at a minimum, the sagittal and axial images of an MRI or CT myelogram, and may require flexion and extension radiographs for indications of spinal instability.

Surgeons were immediately faced with achieving this requirement with no advanced notice. In most cases, the added work often fell to the surgeon. Faced with the possibility of denial, surgeons were required to take additional time out of their schedule in order to locate the pertinent images, copy them in a digital format, and either personally or through their office staff submit the images.
Prior Authorization: Necessary for Quality of Care, or Denial of Care?

Over the years, the prior authorization process has become increasing arduous, especially with regards to imaging requirements. Many insurers, including UHC, will no longer pre-certify a procedure unless a radiologist’s report is submitted. Insurers now rely exclusively on radiologist’s reports rather than the surgeon’s interpretation of imaging, and UHC considers the radiologist’s report the “source of truth” in prior authorization. This has been required, despite the fact that the surgeon is in almost all cases better equipped to correlate the patient’s symptoms and physical examination findings with the radiographic studies, since the radiologist does not see or examine the patient. If a radiologist’s report does not note the specific abnormality for which the surgeon is operating, a procedure would be denied, requiring the surgeon to contact the radiologist, and ask for an amendment to the report.

This leads to the obvious question: If a radiologist’s report is required, and must correlate with the surgeon’s plan for pre-certification, then why do the images themselves need to be uploaded?

This type of prior authorization requirement erodes and nullifies the clinical acumen and decision-making capabilities of the most highly trained surgeons in the country, not in order to improve patient care, but in an effort to deny or delay appropriate medical care.

UHC’s new policy is a natural extension of the utilization of the prior authorization process as a cudgel to prevent patient access to care. The prior authorization process has increased significantly over the last several years, both in terms of utilization as well as the requirements involved. Prior authorization is viewed by physicians as a method utilized by insurance companies to delay the appropriate care of patients. A 2018 survey of 1000 physicians by the American Medical Association regarding the prior authorization process showed the following:

- 91% of physicians surveyed reported that the prior authorization process delays access to necessary medical care;
- 75% reported that the prior authorization process leads to patients abandoning their recommended course of treatment;
- 92% reported that requiring prior authorization can lead to a negative impact on clinical outcomes;
- 28% reported that prior authorization led to a serious adverse event, such as death, hospitalization, disability/permanent bodily damage, or other life-threatening event.

Based upon the data above, a majority of physicians feel that the prior authorization process is specifically designed to be onerous to the physician in order to delay access to care, increase abandonment of treatment, deny appropriate treatment, or at a minimum to delay payment for appropriate treatment.

Institution of UHC Policy and Spine Section Response

Once instituted, surgeons were immediately faced with the task of determining the relevant radiographic images, saving them to a digital format, making sure that the images contained appropriate patient identification, and then uploading them to UHC’s website. In practices where prior authorization tasks are typically completed by clerical staff, this task fell to the surgeon, thus creating a significant workflow issue. There were then instances of peer-to-peer reviews where the UHC medical directors had not reviewed the imaging that was uploaded, therefore bringing into question the utility of such a policy.

In short order, neurosurgeons from across the country contacted the AANS and CNS with complaints regarding this policy. The Payor Response Committee was tasked with providing a response to UHC’s policy. Through the Payor Response Committee, the AANS and CNS sent a letter to UHC on June 23, 2020, discussing the concerns over the policy as instituted. Simultaneously, other medical specialty organizations, including the American Association of Orthopedic Surgeons amongst others, were working on their own response to this policy.

This led to a conference call in July between senior leadership at UHC, including Dr. Russell Amundson, a neurosurgeon who is UHC’s senior medical director, as well as leadership from the AANS, CNS, and AAOS. Dr. Amundson stated that UHC’s policy was to add to the clinical dataset to provide the UHC reviewer with all pertinent information in order to increase “accuracy, objectivity, and consistency.” However, the timing of the new policy during the COVID-19 pandemic significantly increased the burden on surgeons. As expected, UHC stated that they were only making coverage decisions, not determining indications for surgery. However, it was acknowledged that issues with workflow as well as inconsistency with application of the policy at the reviewer level were significant.

The result of the interaction between the Spine Section and UHC has led to the policy being “paused” at this point. However, it is expected that in the future it will be re-instituted, but the timing of this is unknown. It was pointed out that one consideration would be that images only be requested for procedures that require a peer-to-peer review.

In general, while the requirement for uploading radiographic imaging may be appropriate for certain select cases, the added burdens, costs and time delays incurred by requiring images to be provided for all cases causes increased workflow issues without adding to the quality of patient care.

The Payor Response Committee, as well as the Spine Section, the AANS, and the CNS will continue to advocate for ease of access to appropriate surgical care and will keep you informed of our progress. If you have any questions, or are able to provide instances of this or other policies that prevent access to care, please contact us at your convenience.
Superior Cluneal Neuropathy: In the Differential Diagnosis for Low Back Pain

Thomas J. Wilson, MD

The superior cluneal nerves typically arise from the lateral branches of the posterior rami of L1, L2, and L3. These nerves pierce the thoracolumbar fascia and course over the posterior iliac crest to supply the upper, lateral buttock. Though typically depicted as three nerves (L1-L3), anatomic studies have shown that the superior cluneal nerves can comprise between two and five nerves, arising from as rostral as T12 to as caudal as L5.1,2 These nerves are particularly relevant to spine and peripheral nerve surgeons since entrapment of these nerves should be considered in the differential diagnosis for low back/upper buttock pain and also because these nerves are at risk for injury when harvesting iliac crest to be used for bone graft.

There are two potential points of entrapment for this group of nerves: 1. where these nerves pierce the thoracolumbar fascia and 2. where the nerves cross the iliac crest. Most commonly, this group of nerves passes over the iliac crest outside of any anatomic tunnel. However, one or more of the nerves may pass through a fibro-osseous tunnel in this location, putting the nerve(s) at risk of compression or tethering within the tunnel.3

Patients with superior cluneal neuropathy typically present with pain in the low back or upper buttock, but can also have leg symptoms. The leg symptoms tend to be more vague and have been referred to as “pseudo-sciatica.”2 Since these nerves arise most commonly from L1-3, the symptoms in the leg tend to be in the corresponding dermatomes. However, there is some evidence to suggest that superior cluneal nerves arising from L4 and L5 are more likely to pass through a fibro-osseous tunnel, making them more at risk of entrapment and helping to explain why patients often present with “pseudo-sciatica.”2 Leg symptoms can be more severe than the low back symptoms, which is what makes this difficult to distinguish from sciatic neuropathy or lumbosacral radiculopathy, in many instances.4 The pain is usually neuropathic in quality and most commonly is described as burning. Twisting and bending often exacerbate the pain. On examination, the patient will typically have a point of tenderness over the iliac crest or just rostral to it, approximately 70 mm lateral to the midline. Palpation of this area will recreate the symptoms.

When superior cluneal neuropathy is being considered as a diagnosis, an ultrasound-guided diagnostic nerve block can be requested to support the diagnosis. Treatment options include lifestyle modification, neuropathic pain agents, steroid injections, peripheral nerve/dorsal root ganglion/spinal cord stimulation, nerve decompression, and neurectomy. This condition is likely under-recognized and is important to consider in the differential diagnosis of low back pain and/or sciatica.

References:
Peripheral Nerve Updates for DSPN Members

Line Jacques, MD

1. The Peripheral Nerve Business Dinner during the CNS at the Fontainebleau in Miami on Sunday, September 13, 2020, has been cancelled. Next meeting TBD.

2. The 2020 Kline lecture will be presented by Dr. Mario G. Siqueira (University of Rio de Janeiro, Brazil) on Wednesday, April 27, 2021, during the AANS meeting in Vancouver, Canada. The lecture title: Evolution of the treatment of neonatal brachial plexus injuries.

3. The Kline Research Award will be offered again this year to support either basic or clinical research related to peripheral nerves with funding in the amount of $10,000. The research award provides means of peer review for clinical projects and, therefore, to enhance competitiveness for potential National Institutes of Health (NIH) funding.

4. Dr. Ilyas Eli (Dr. Mark Mahan, University of Utah) will present a talk entitled “Comparison of rapid-stretch injuries to conventional crush, transection and repair” on Wednesday, April 27, 2021, at the AANS meeting in Vancouver, Canada.

5. The winner of the 2019 Kline Research Award is Christopher F Dibble from St. Louis. He will present a talk entitled “MO on Optimizing Nerve Regeneration” on Wednesday, April 27, 2021, at the AANS meeting in Vancouver, Canada.

6. The winner of the 2020 Kline Research Award is Dr. Daniel Umansky (Dr. Rajiv Midha, University of Calgary). Use of focused ultrasound for reversible opening of the blood-nerve barrier.

7. Kline NREF “Honor Your Mentor” Fund is on the NREF website. If you would like to contribute to the fund, please visit the Kline NREF Fund website: http://www.nref.org/donate

Note that the Peripheral Nerve Division leadership controls the use of the NREF PN funds (including the Kline fund) for research or education, within the guidelines of the NREF.

8. Upcoming meetings

WFNS 5th theoretical & practical international course in peripheral nerve & brachial plexus surgery in Rio de Janeiro, Brazil, November 20-22, 2020, has been cancelled.

ASPN annual meeting, January 15-17, 2021, Grand Hyatt Resort & Spa, Koloa, HI—Cancelled  
http://www.peripheralnerve.org/meeting

The 7th annual Peripheral Nerve Dissection Course: “The Kline Legacy” in New Orleans, Louisiana will take place on January 30-31, 2021.

Narakash 2021 22nd international symposium on brachial plexus surgery, May 27-29, 2021, Berlin, Germany.


25th Meeting of the Sunderland Society, TBD.