Assessment of Psychiatric Disability

Jeffrey S. Barkin MD, DFAPA and David Ray, MD

Healthcare professionals are frequently asked to determine whether their patients are disabled or not by a mental health diagnosis. With a lifetime prevalence of major depression in the United States being 16%, mood disorders have a substantial impact on productivity in the workforce.

In order to determine if a patient is psychiatrically disabled, the patient’s mental status and psychological state has to be clearly demonstrated to be adversely impacting the patient’s functional capacity. Teasing apart a psychiatric diagnosis from a medical diagnosis can be difficult and interactions between the two occur in often unpredictable ways.

A psychiatric diagnosis depends upon a careful historical review of an individual's behaviors and mental status. A good assessment seeks to define a longitudinal history of the individual, being as specific as possible with concrete examples of impaired functioning and distress. Cross sectional assessment is less useful. A still photograph of a scene yields far less information than a longitudinal study as might be recorded by a videotape. The assessor must strive to define an accurate longitudinal picture of the patient in order to best define current or past episodes of disability.

A thorough formal mental status evaluation not only can aid in establishing the psychiatric diagnosis but in itself can define the psychiatric impairment. While psychiatric assessment has been criticized for being subjective, individual components of the mental status are readily reproducible by different examiners. For example, 5

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Minimally Invasive Spine Surgery: How, when, why and why not?

Karen Huyck, MD, Tony Tannoury, MD, Abe Timmons, DO

This article is the second in the series of articles on Minimally Invasive Surgery (MIS).

As discussed in the previous article on spine surgery, the main concept of minimally invasive surgeries (MIS) in general and in spine surgery in particular is to achieve the goals of the procedure with the least amount of collateral and unnecessary damage [1]. Several techniques have been described in the literature with varying clinical success.

Conditions that may be amenable to minimally invasive surgery include:
- Disc herniation
- Spondylosis (degenerative disc disease)
- Spondylolysis (pars defect)
- Spondylolisthesis (slipping of one vertebra on top of another)
- Scoliosis
- Traumatic conditions, fractures, and dislocation of the spine
- Tumors
- Infection

This article will review some of the most commonly used treatment modalities and MIS techniques and discuss the potential benefits and complications:
1. Injection therapies such as epidural steroid injections, medial branch blocks, radiofrequency ablation (RFA), etc..
2. Endoscopic techniques
3. Percutaneous tubular techniques
4. Minimal access spinal fusions

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As with any medical condition, a careful history and physical exam, thorough diagnostic assessment, understanding the natural history of the condition, appropriate training, a plan for addressing confounding variables, and a focus on function are the cornerstones of treatment.

INJECTION THERAPIES

Epidural Steroid Injections (ESI):
Increased inflammatory mediators such as inflammatory cytokines, TNF, and others have been implicated as a source for radiculitis and nerve pain. As a result, the infiltration of anti-inflammatory agents such as steroids in the epidural space (ESI) has been commonly adopted. The efficacy of the ESI is unclear [2,3,4]. A Cochrane review of injection therapies for low back pain concluded that there is no strong evidence for or against the use of any type of injection therapy, but did not exclude that specific subgroups of patients may respond to a specific type of injection therapy [22]. Evidence-based guidelines recommend ESI as an option for short-term treatment in the presence of corroborative findings of radiculopathy if used in conjunction with active rehabilitation efforts and followed for functional improvement, but generally should not be used in the treatment of spinal stenosis or axial low back pain without radiculopathy.

Radiofrequency ablation:
There are two types of radiofrequency ablation, thermal (or non-pulsed) and pulsed. Thermal ablation involves the percutaneous placement of a needle or electrode that destroys the bone lesion or nerves around the facet joint. Once the probe is placed, lesions or nerves are then targeted unilaterally or bilaterally for 40 to 90 seconds at temperatures of 60 to 90°C. The other type of radiofrequency ablation is pulsed RFA (PRFA) which has been introduced as a non-ablative alternative to RFA. PRFA delivers short bursts of radiofrequency (RF) current, of 2 Hz with temperatures not exceeding 42°C, instead of the continuous flow of RF current produced by continuous RF generators. The use of ablation therapies is still considered under investigation [5,6,7].

ENDOSCOPIC TECHNIQUES

(FIGURE IA)

Indications: Endoscopic techniques have been primarily applied to simple disc herniation without the need for spinal fusion or instrumentation.

Technique: This is typically a same-day procedure that utilizes an endoscope through a very small incision to access a herniated disc. (Figure 1A).

Some studies have shown equivalent results with endoscopic techniques as open surgery but with limited application and high conversion rate to open discectomy [8]. One possible complication to be aware of with this technique is the potential for undertreatment of spinal disorders that could require larger decompression or fusion, which may result in ongoing or increased disability.

PERCUTANEOUS TUBULAR TECHNIQUES (FIGURE IB)

Indications: Laminectomy (Figure 1B), discectomy, and short segment spinal fusions.

Technique: Progressive tubular dilation (typically 12-24 mm diameter) that allows muscle splitting and docking right on the site of pathology without disturbing surrounding muscles and normal structures.

Tubular discectomy and fusion have gained popularity since the 1990s with varied results. Most studies have shown equivalent outcomes with open discectomy and laminectomy and better outcomes of minimally invasive tubular Transforaminal or Posterior Lumbar Interbody Fusion (TLIF or PLIF) over open fusion surgery (Figure 2) with lower complication rate, shorter hospital stay, and lower cost for minimally invasive tubular transforaminal posterior interbody fusion [9,11,12].

Percutaneous pedicle screw placement
One of the most dramatic changes in the field of spine surgery has been the adoption of percutaneous placement of pedicle screws instead of full exposure of spinal elements resulting in significant muscle damage.

The screws are placed by using image guidance (fluoroscopic or CT) in order to allow safe placement of a Jamshidi needle followed by placement of flexible wire that guides the placement of the cannulated screws percutaneously. These screws are then connected together using...
A thorough mental status exam should include the individual’s appearance, psychomotor rate, presence of abnormal mannerisms or motor activity, assessment of speech, including comprehension, expression and repetition, full assessment of all domains of cognition, including attention, concentration, orientation (to person, place, day, date, and situation), short-term memory, long-term memory, visuospatial skills, and abstraction as assessed using similarities and proverbs. Description of mood and affect is paramount. Assessment of current safety status is always warranted, including observations of suicidality, homicidality, and other factors which define imminent risk. Descriptions of prior episodes of self-harm or episodes of violence to others are important. Assessment of thought process to delineate the presence or absence of tangentiality or loosening of associations such as might be seen in psychosis, as well as racing thoughts or flight of ideas, as may be noted in hypomania or mania, is important. Comprehensive assessment of psychotic symptoms including hallucinations, delusions, and other thought content symptoms, including paranoia should be assessed.

As previously stated, the goal of psychiatric assessment is to develop a timeline of the patient’s specific psychology and psychopathology, if present, especially as it relates to areas of functioning. Such a timeline will carefully reflect specific examples of function in the domains of living (social, occupational, scholastic, and relational) and potential relationship to specific psychiatric diagnoses across the individual’s lifetime. Understanding family history, medical history, substance abuse history, and psychosocial history, including prior trauma history, creates a story that can describe a history of psychiatric illness, contributing factors and the overall impact on a patient’s life. For example, delineation of prior history such as the presence of prior episodes of depression resulting in psychiatric hospitalization after a suicide attempt may aid in the diagnosis of a more complex mood disorder, such as bipolar disorder (manic depressive illness).

The fact that individual components of mental status are highly reproducible with a high degree of inter-rater reliability is comforting given the criticism often levied at mental health at being overly subjective. Nonetheless, high rates of inter-rater reliability do not always reflect diagnostic validity.

Factors such as secondary gain for litigation or other financial reasons may complicate the assessment process. Nonetheless, it is frequently helpful to obtain collateral information from family members, coworkers, teachers, and other individuals when fact patterns are uncertain.

Another consideration when making a disability determination is that individuals who might require more intensive treatment or are anxiously avoidant of work can exert pressure on the evaluator to support their dependence and regression. This can lead to a kind of iatrogenic disability that has a high risk of lifelong morbidity the longer a person does not work. Clinicians should resist supporting disability if it is not warranted regardless of pressure exerted by the claimant.

Diagnostic formulation should utilize accepted diagnostic criteria, such as the Diagnostic and Statistical Manual of the American Psychiatric Association. Specific examples to support each relevant diagnostic criterion should be offered. As an example, description and affirmative listing of 5 of 9 specific diagnostic criteria is critical in supporting a diagnosis of major depressive disorder.

Once supportable and reproducible diagnostic criteria are identified to support or refute specific psychiatric diagnoses, functional limitations must be carefully considered. The goal is to relate a psychiatric diagnosis to potential impairments in functioning. Consideration of the intensity and duration of decreased functioning must be carefully documented and specific examples should be included to define functional impairment. For example, cognitive decline secondary to severe head injury resulting in an inability to balance one’s checkbook, use a computer, or reliably keep records may adequately define the impact of a cognitive disorder on functioning.

Non-organic causes of mood disorders, such as major depression, can have profound negative impacts on functioning. Major depression frequently results in loss of energy, as well as diminished motivation and drive, as well as the capacity to experience pleasure and sustain interest in activities, amongst other symptoms. Deficits in these areas may result in marked functional impairments. The impact of depression on other medical illnesses should not be underemphasized. Additionally, depression strongly interacts with pain in a bidirectional manner such that symptoms of depression may exacerbate pain states and high levels of pain can exacerbate depression.

Anxiety disorders are very common diagnoses and resulting avoidant behavior is a primary feature of many anxiety conditions. The impact of external stressors is a frequent question that may arise in disability determinations. For example, workplace conflict may be experienced as traumatic to a patient but it is not threatening. A diagnosis of PTSD would not be warranted. However, individuals with trauma histories may get triggered by conflict at work resulting in an exacerbation of PTSD symptoms. A thorough formulation must consider the relative contribution of past events in relation to current life stressors.

A frequent consideration in the assessment of psychiatric disability asks whether the mental health diagnoses impede the individual’s ability to perform the essential functions of their employment and the reason(s) for the individual not being able to perform the essential job functions. The elements of the psychiatric diagnosis and mental status findings should explain why there is functional impairment. Defining what specific functions the patient cannot perform is paramount.

Contribution of co-occurring medical diagnoses is very important. An example includes the contribution of brain injury to prior psychiatric diagnoses. Increased rates of disability, such as seen in combat veterans, are often present in individuals with both posttraumatic stress disorder and traumatic brain injury. Thus, refer-
a longitudinal rod that helps stabilize the spine (Figure 3). The accuracy and safety of this image-guided technique is now well established as improving patient outcomes.

**DIRECT LATERAL AND ANTEROLATERAL APPROACHES**

The author of this article, Tony Tannoury, who developed and patented many techniques and technologies that allows access to the spine via posterior, posterolateral, lateral and anterolateral techniques considers that the latter is the most powerful and promising technique in MIS for the reasons listed below.

**FIGURE 4**

**Indications:** Spinal fusions, spondylolisthesis, and sagittal, coronal, and axial deformity

**Technique:** The spinal column can be accessed from a lateral angle or through a slightly more anterior incision using an anterolateral angle (Figure 4) rather than a posterior approach. Different companies have different names for the lateral approach techniques such as lateral Cougar, XLIF (Extreme Lateral Interbody Fusion), Direct Lateral, etc.

Advantages of both the lateral and anterolateral techniques when applied appropriately include:
- The ability to address both simple and complex disorders
- Suitability for short or long segment diseases
- Reduction of post-operative pain
- Shorter recovery period
- Fewer complications such as infection, dural tears, and nerve root injuries
- Reduced cost

Advantages of the anterolateral approach when applied appropriately include the following (Figure 5):
- Avoiding disruption or injuring the psoas muscle which contains the lumbar-sacral plexus resulting in thigh and leg burning and or weakness
- Avoiding need for costly intraoperative neuro-monitoring that is necessary for a trans-psoas approach
- A simpler technique to use and allows access to and treatment of spinal disorders from the T12 to the S1 level
- Improved access to the lumbar spine gives the ability to achieve more robust correction of disc height and sagittal and coronal deformities (Figure 6)

**Cost:**
One common misunderstanding is that novel minimally invasive surgery should be more expensive than the standard open surgery. Despite more expensive novel implants, numerous studies showed that MIS techniques are less costly compared to open surgery.

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Most of the cost reduction is due to the shorter hospital stay, less costly complications such as infection, reduced need for postoperative pain medication, and earlier return to normal daily activities. Cahiil, et al. [10] showed $5,453 saving per MIS discectomy vs an open procedure and shorter hospital stay (0.9 days vs 1.5 days). Parker, et al. [12] concluded that multiple level decompression MIS has the same cost as the equivalent open surgery. Pelton, et al. [21] showed 12% cost reduction in TLIF (posterior fusion) in MIS vs open in a workers’ compensation population.

**Complications:**

Minimally invasive spinal surgery does share most of the open spine surgery complications, however, at different rates. Some of the most relevant complications are:

1. **Infection:** The infection rate has fallen dramatically with the use of MIS techniques mainly due to the reduction in tissue damage and postoperative dead space. For most procedures, the infection rate dropped by 60 to 90%. In a meta-analysis of the literature, the infection rate was 0.6% versus 4% with a cost saving of $24,000 per infection. In a report from the Scoliosis Research Society worldwide database (containing more than 11,000 surgeries), the infection rate was reduced dramatically in the MIS group (0.4% vs 1.1 for the discectomy group and 1.3 vs 2.9% for the fusion group) [16].

2. **Neurological injuries:** Most studies showed equivalent or reduction of the risks of neurological injuries [9,19,20] with MIS approaches.

3. **Accuracy of placement of hardware:** Counter-intuitively and despite percutaneous targeting of the spinal elements instead of open visualization, minimally invasive surgery has been associated with much reduced rate of misplaced hardware. This improved accuracy is most likely related to the abundant use of advanced image guidance or spinal navigation [17,18,19,20].

4. **Deformation correction:** MIS techniques have been shown to achieve good coronal alignment. One of the main limitations of MIS techniques, however, is the limited ability of the correction of the sagittal balance. The anterolateral approach allows for correction of sagittal balance because of the ability to perform anterior tether release and to re-establish normal disc heights (Figure 6).

**Conclusions:**

As education, training, and research evolve, more traditional open surgical management are and will be augmented or replaced by minimally invasive technologies and approaches. Minimally invasive spinal surgery can be a safe, effective, and cost saving procedure when performed by well-trained and specialized surgeons. The authors caution the readers, however, that minimally invasive spine surgery is used as a marketing tool by some surgeons who may or may not have the proper training to achieve the full benefits from these promising techniques. As with any technology, training is critical, and the use of technology should not replace critical thought and reason. Also, smaller incisions do not always mean a better outcome. By understanding some of the current and emerging terms, techniques, approaches, and potential complications and benefits, non-surgeons can better assist their patients navigate the often confusing and controversial landscape of spine injury treatment.

**References:**

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An evaluator may be asked to opine on whether a specific psychiatric diagnosis may interfere with the ability to perform work.

Another question that frequently arises is: Has treatment to date been reasonable and necessary? An answer to this question should include assessing whether the performed therapy comports with evidence-based practices. Cognitive behavior therapy has documented evidence-based support regarding its efficacy, while other forms of psychotherapy have less compelling data.

Assessment of appropriate psychopharmacologic management is critically important as well. Though symptoms of a psychiatric diagnosis may be high in a given individual, under-treatment, or lack of appropriately aggressive treatment, remains quite common. Examples include ongoing treatment with ineffective medications or the use of medications at too low a dose or for too short a duration of treatment. Also, one may be asked to provide recommendations for potential treatment in the case of treatment non-responders.

Another question that often arises is whether the disability would be expected to be permanent. Assessment of the recurrence and duration of symptoms with input from others who know the patient is of paramount importance in making this assessment. Careful consideration of co-morbidities including pain disorders, medical disorders, and substance abuse diagnoses is similarly critically important in formulating a legally defendable opinion. Central nervous system dysfunction seen in patients with severe traumatic brain injury from penetrating skull trauma may often be expected to be permanent while the effects of a single episode of major depression are usually not.

Determination of whether one's patient is disabled may be assessed by considering the elements described above. While filling out disability forms may be seen by some as a nuisance, it is also an opportunity to reformulate a patient's complete clinical picture. It offers the clinician an opportunity to pull together elements from the patient's longitudinal history in an effort to answer specific questions related to functioning. It also allows time for clinicians to reflect on whether the patient has received the appropriate intensity of treatment and if they are truly destined to remain disabled.

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2014 NECOEM/MAAOHN ANNUAL CONFERENCE

Matt Lundquist, MD, MPH (Conference Chair)

The Annual Conference Committee is excited about this year’s conference, entitled “The Science and Practice of OEM: Innovations and Challenges.” Highlights include Stefanos Kales, MD, MPH, the 2014 Harriet Hardy Award Winner, whose talk is entitled "Cardiovascular Disease in Firefighting and Law Enforcement: the Journey from Resident Project to State of the Science." The William B. Patterson Memorial Lecture on Excellence will be delivered this year by Laura Punnett, ScD, from UMass Lowell on "What is Total Worker Health™? Why to consider integrating safety, ergonomics, and wellness for employee health and well-being." This year, the conference will feature two exciting panel discussions. The first, "Approaches to Low Back Pain," will consist of a panel composed of leading experts from around the country. The second panel discussion, "Low-wage Immigrant Workers: Barriers to Receiving Medical Care and Workers’ Compensation Benefits after a Workplace Injury," will feature regional experts on this very important topic. We will also have a very timely lecture entitled "Opportunistic Airborne Transmission: Implications for Management of Patients with Ebola Hemorrhagic Fever" given by Mark Russi, MD, MPH.

There are 11.25 hours of Category I CME credits, CNE credits from AAOHN, CCM credits, and ABIH credit as well as 11.25 hours of MOC credit available; a President’s Dinner Reception and Poster Competition, with a buffet dinner and drink tickets included in the registration fee. Additional guests may attend for an additional fee.

As always, there will be ample opportunities for networking and exploring vendor exhibits. MaAOHN and NECOEM Annual Meetings will take place on Friday during the noon luncheon.
IN MEMORIAM – MEHRDAD O. HAMELDANI, MD

NECOEM and the New England Baptist Hospital lost a beloved physician and community member on July 10, 2014, Mehrdad O. Hamedani, MD. Dr. Hamedani received his medical education and post graduate training in orthopedics in Iran at Shiraz University. After immigrating to the United States, he completed an internal medicine residency at the Yale – Griffin Hospital. He worked in the Boston area at settings including the East Boston Health Center and the New England Baptist Hospital. He was a vital member of the Occupational Medicine team at an Occupational Environmental Health Center Physician, and provided outstanding care for countless patients in his 15 years at the Baptist and with the Baptist’s partner community hospitals.

Here’s what NECOEM member Fred Kohanna, MD, MPH, FACEOM, has to say: “Dr. Hamedani and I spent two years working together at the Logan International Airport Occupational Health Center. He was a vital member of the Occupational Medicine team as an Occupational Environmental Health Center Physician, and provided outstanding care for countless patients in his 15 years at the Baptist and with the Baptist’s partner community hospitals.

Dr. Kohanna also shared many facets of Dr. Hamedani’s character with the editorial team including the manner in which he treated his patients and trained physicians and residents alike, sharing little pearls of wisdom and stories when you presented him with a problem or issue and being there when you needed him, a benevolent, positive force, whose soft calm voice and little story could instantly lift your spirits and provide some direction.

NEBH and OEHN (Occupational and Environmental Health Network) have established a fund in memory of Dr. Hamedani to help strengthen the Baptist’s innovative efforts to treat and prevent workplace injuries and to train the next generation of occupational health practitioners to approach medicine with the zeal and dedication that Dr. Hamedani demonstrated each and every day. If you would like to contribute to this fund in memory of Dr. Mehrdad O. Hamedani, please mail your contributions by check to the Office of Philanthropy, 125 Parker Hill Avenue, Boston MA 02120. In the memo line of your check or in an accompanying letter, please indicate that this gift is in memory of Dr. Hamedani and should be earmarked for the Mehrdad O. Hamedani MD Fund. If you prefer to give online, please call the Office of Philanthropy at 617-754-6880, and be sure to indicate that your credit card gift should be directed to this fund. If you prefer to give online, please visit www.nebh.org/giveonline, follow the instructions for “Gifts in Memory,” indicating in the comments section at the bottom of the page that this gift should be directed to the Mehrdad O. Hamedani, MD Fund.

Occupational Physicians Gain Stature in Vermont and Influence the Legislative Process

by Nelson S. Haas, MD, MPH, FACEOM

Medical organizations, such as medical specialty and state medical societies, represent physicians’ interests. When the interests of a small constituent specialty in a medical society are disproportionately affected by a change in practice environment, such as a change in a law, the majority may consider the change peripheral, may not be as familiar with the issue as the affected minority, and may not attend to the issue. Occupational physicians are a small constituent of all physicians, but are often profoundly affected by changes in laws that govern workplace health issues, for example, changes in workers’ compensation laws. Additionally, changes to workplace laws may affect employers and employees in ways into which occupational physicians, as clinicians whose business it is to know the workplace, have insight.

During the 2014 session of the Vermont State Legislature, Act 199 passed with provisions about opiate analgesic use that affect occupational physicians. Fortunately, the legislators that wrote the bill were sympathetic to the interests and expertise of occupational physicians; and the legislature, through the Vermont Medical Society (VMS), obtained input from occupational physicians. The final bill specified that the ACOEM Occupational Medicine Practice Guidelines be considered in matters concerning prescription of opiates to workers’ compensation claimants (Section 52) and that the state government’s Unified Pain Management System Advisory Council have a clinician who specializes in occupational medicine (Section 60). It is not likely that these provisions would have appeared without sustained involvements of occupational physicians in VMS and the willingness of occupational physicians to offer their clinical and subject matter expertise to legislators and the VMS in the legislative process. A beneficial side effect of the occupational physicians’ involvement is that now the legislators on the relevant committees know who to turn to for clinical expertise in the area of workers’ compensation and occupational medicine. Otto von Bismarck said “Laws are like sausages, it is better not to see them being made.” In the case of the 2014 Vermont legislative session, a few occupational physicians, including Verne Backus, Philip Dagnon, and myself were involved in the sausage making process to ensure that the legislative repast was more palatable to occupational physicians. We could use more cooks in the kitchen. Get involved!

Dr. Haas wrote in the Spring Issue describing his initial efforts of getting occupational physicians involved in the Physician Policy Council (PPC) which is assembled through the Vermont Medical Society (VMS). Dr. Haas has been a member of NECOEM since 2001. He can be reached at NSOMC.MD@myFairPoint.net
WHO IS IT?

This is the second in the series of trivia, facts, figures, etc. related to the field of occupational medicine. If you have any such interesting or fun-filled material, please e-mail it to the associate editor at dr_abhik@yahoo.com. All material should be related to the specialty of occupational and environmental medicine and have an educational, inspirational, historic or other relevant value.

This famous personality pioneered the randomized controlled trial and was the first to demonstrate the connection between lung cancer and its famous causative agent. As occupational medicine practitioners, we apply one of his pioneering works in what we do, with some using it on weekly or daily basis. Who is it?

Please send responses to Abhijay Karandikar at dr_abhik@yahoo.com

Readers who send in correct responses will be identified in the next issue. The correct answer will be published in the next issue of the NECOEM Reporter.