

DISABILITY MEDICINE

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of Independent Medical Examiners

Editorial Board

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EDITORIAL:

Perils of Being an Independent Medical Examiner

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Hostility exists in Worker's Compensation and in Litigation arenas where Independent Medical Evaluations are commonly used. This hostility is age old, and it is born naturally from a situation where a legal bias to represent one's client in the light most favorable to the client exists. This issue of Disability Medicine carries a letter from Mr. Tom DiGrazia, Esq. underscoring this hostility. The review in this issue of the book Independent Medical Evaluations sheds light as well on the perspectives of plaintiff and defendant, i.e., on the bias itself.

Unfortunately, as part of the IME process, physicians are affected by this bias, and because of the hostility of this environment, this bias makes involvement in the IME process potentially dangerous for physicians. Parties who do not like the message of the opposing side's independent medical examiner, sometimes resort to tactics to harass and intimidate physicians who try to be intellectually honest, and who speak what they consider the truth. Particularly in cases involving controversial diagnoses, the risk of action against physicians is increasingly common; some have even called Independent Medical Evaluation a full contact sport. The goal of these militant actions against Independent Medical Evaluators is to discourage physicians – at best well meaning, good, and honest – on both sides from speaking their minds. One such tactic would be the filing of a complaint with a Medical Licensing Board; another would be legal maneuvering that squanders a physician's time and money.

Most of the jurisdictions have consistently held that Independent Medical Evaluators do not owe an examinee a duty of care, and more generally that a physician has no liability to an examinee for negligence or professional malpractice absent a physician-patient relationship, except for physical injuries incurred during the

course of the examination. Arizona Supreme Court said it best¹. "If an IME practitioner's evaluations, opinions, and reports could lead not only to vehement disagreement with and vigorous cross-examination of the practitioner in the claims or litigation process, but also to his or her potential liability for negligence, the resulting chilling effect would be severe. To permit such an action by expanding the concept of duty in this type of case would be, at best, ill-advised."

In an inherently biased and hostile environment, it is of utmost importance for society in general that Independent Medical Evaluators on both sides are not discouraged from reporting what they consider the truth, and that they be allowed to speak their mind without the fear of reprisal. The Colorado Supreme Court summed it up²: "Simply put, the social utility of allowing physicians to conduct IME's without fear of liability to the examinee substantially outweighed the benefit of allowing such claims." Judicial views such as these should be reassuring to Independent Medical Evaluators on both sides and require Independent Medical Evaluators to maintain intellectual honesty despite bias of the requestor of the IME. It is in this way, by maintaining this intellectual honesty, that the physician can best function to maintain the integrity of the process. While the ride through legal terrain – such as cross-examination, and, in some cases, worse – can be rough for Independent Medical Evaluators, with legal precedents such as described, there is hope that in the end, despite bias and hostility, intellectual honesty can prevail.

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Reference

¹ Hafner v. Beck, 916 P.2d 1105,1107 (Az. App. 1995):

² Martinez v. Lewis, 969 P.2d 213 (Col. 1998)



Original Research Article

Classifying Fibromyalgia: Taxonomic Lessons from the Icelandic Disability Registry

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Introduction

Fibromyalgia Syndrome (FMS) has defied consistent classification by physicians and remains controversial.¹⁻⁴ Uncertain classification has implication for consultation, treatment, research, and determination of impairment and disability. The etiology of the condition is unclear and some question the existence of fibromyalgia as a distinct clinical entity.⁵⁻¹² Depending on one's clinical specialty or research interest FMS may be variously categorized under rheumatology, neurology, chronic pain, sleep disorder, or psychiatry.¹³⁻¹⁴

The International Classification of Disease, Ninth Revision (ICD-9) has no specific code for fibromyalgia, and the condition is often coded as 729.1, corresponding to "Myalgia and

Myositis, unspecified, or "Fibromyositis NOS".¹⁵ This classification, widely used for billing, would thereby classify FMS as a disease of muscle. Since disease classification can be important in determining etiology, disability criteria and clinical research, many attempts have been made to suggest and justify various ways to classify FMS.¹⁶⁻²⁰ Since the etiology is unknown and no consistent biochemical marker has been identified, attempts at classification often compare types of attendant or secondary diagnoses between categories²⁰⁻²⁵ as well as numbers of diagnoses.²⁶⁻²⁷ This study employed a unique data set to compare types of numbers of secondary diagnoses and determine the most compatible disease category for a group of disabled

pensioners with the primary diagnosis of FMS.

This study utilized the disability registry of the State Social Security Institute of Iceland (SSSI) because the Icelandic population is relatively narrow in genetic and cultural variation compared to that of other nations. This registry provided primary and secondary diagnoses and information on sex and age for all recipients of full disability in Iceland on December 1, 2001.²⁸⁻³⁰ Since previous studies of fibromyalgia have been criticized because of wide genetic and cultural diversity across subjects access to Icelandic population data was especially useful to this study.^{20, 26} The citizens of Iceland are considered to represent a group of relatively narrow genetic and cultural diversity. In addition, a



previous nationwide study had determined the prevalence of the diagnosis of FMS in Iceland.³¹

Materials and Methods

Data from the disability registry from SSSI was used to form two age-matched groups. Since over 93% of disability pensioners with FMS were female, only females were included in the study groups. The study group consisted of female pensioners with FMS as one of their listed diagnoses. The comparison group consisted of the consecutively encountered disabled pensioner with a date of birth which matched that of the index case within 90 days and who did not have a listed diagnosis of FMS. Statistical significance was determined using the chi-square test.³²

Comparisons were made between the study and control groups in the percentage of pensioners with single versus multiple diagnoses as the basis for disability and in the distribution of categories of illness of secondary diagnoses. The FMS (study) group was also compared to three groups of disabled pensioners with one of three serious, disabling diseases as their primary diagnosis, including a neurological diagnosis (multiple sclerosis), a rheumatologic diagnosis (rheumatoid arthritis), and a psychiatric diagnosis (schizophrenia) in terms of number of secondary diagnoses. As a result of initial findings, the FMS (study) group was also compared to disabled pensioners with the primary diagnosis of anxiety/depression in

distribution of numbers of secondary diagnoses.

Results

On December 1, 2001, 10,588 people, including 6268 women and 4320 men, with full disability pension were registered at the SSSI. FMS was listed among the diagnoses of 766 disability pension recipients, totaling 716 women and 50 men. Since previous studies have also shown that FMS is far more prevalent in women, only women with that diagnosis were included in the study. An age-matched comparison group was identified (Table 1) because the FMS group (index group) could not be accurately compared to remaining women with full disability pension due to a wide age variation between groups.

Table 1: Age distribution of women with full disability pension.

Age (in years)	Index group (with FMS)		Comparison group		All women	
	Number	Percentage	Number	Percentage	Number	Percentage
16-19	0	0.0	0	0.0	80	1.3
20-24	2	0.3	2	0.3	174	2.8
25-29	6	0.8	6	0.8	266	4.2
30-34	29	4.0	29	4.0	333	5.3
35-39	77	10.8	77	10.8	611	9.8
40-44	109	15.2	109	15.2	739	11.8
45-49	121	16.9	121	16.9	728	11.6
50-54	115	16.1	115	16.1	816	13.0
55-59	136	19.0	136	19.0	911	14.5
60-64	100	14.0	100	14.0	1015	16.2
65-66	21	2.9	21	2.9	595	9.5
Total	716	100.0	716	100.0	6268	100.0



Table 2 compares the distributions of the number of diagnoses for each pensioner in the FMS (study) and comparison groups. In the FMS (study) group, FMS was the only diagnosis in only 6.8% pensioners, while 38.3% of the control group had a single listed diagnosis. The percentages of multiple diagnoses in the FMS (study) group exceeded those of the control for each number of diagnoses reported.

Table 2: The number of diagnoses registered for women with full disability pension, with (index group) and without (comparison group) the FMS diagnosis.

Number of diagnoses per person	Women with FMS (n = 716)	Women without FMS (n = 716)
1	49 (6.8%)	274 (38.3%)
2	233 (32.5%)	184 (25.7%)
3	205 (28.6%)	120 (16.7%)
4	125 (17.5%)	85 (11.9%)
5	62 (8.7%)	35 (4.9%)
6	27 (3.8%)	12 (1.7%)
7	7 (1.0%)	3 (0.4%)
8	5 (0.7%)	2 (0.3%)
9	3 (0.4%)	0 (0.0%)
10	0 (0.0%)	1 (0.1%)

Table 3 compares the two groups in terms of the numbers and percentages of secondary diagnosis by disease

Table 3: Diagnoses according to selected main groups of diseases registered for two groups of women with full disability pension, one with (index group) and the other without (comparison group) the diagnosis of FMS.

Groups of diseases*	Women with FMS (n = 716)		Women without FMS (n = 716)	
	Number	%	Number	%
Infections	6	0.8%	13	1.8%
Malignant neoplasms	3	0.4%	30	4.2%
Endocrine, nutritional and metabolic diseases	98	13.7%	79	11.0%
Mental disorders	415	58.0%	329	45.9%
Diseases of the nervous system	71	9.9%	101	14.1%
Diseases of the circulatory system	76	10.6%	86	12.0%
Chronic obstructive pulmonary diseases	82	11.5%	63	8.8%
Diseases of the digestive system	50	7.0%	44	6.1%
Diseases of the skin/subcutaneous tissue	20	2.8%	19	2.7%
Diseases of the musculoskeletal system other than fibromyalgia	321	44.8%	318	44.4%
Diseases of the genitourinary system	25	3.5%	20	2.8%
Injury and poisoning	53	7.4%	83	11.6%
Other diagnoses	20	2.8%	34	4.7%

* from the International Classification of Diseases

category. The groups are statistically significantly different ($p < 0.0001$). Among individual categories of disease, the only category showing significance was that of "Mental Disorders." The FMS (study) group listed a significantly ($p < 0.0001$) higher percentage of diagnoses in this category (58.0%) than the control group (45.9%). Because of this, the FMS (study) group was compared to the 968 disabled female pensioners listing "anxiety / depression" as their primary basis for disability. The

groups were compared in terms of the distribution of numbers of diagnoses per pensioner. This comparison is shown in Table 4. The distribution pattern between the two groups is similar, with the "anxiety / depression" group showing a slight tendency toward increased numbers of secondary diagnoses.

Table 5 compares the distribution of numbers of secondary diagnoses in the FMS (study) group to schizophrenia,



Table 4: The number of diagnoses registered for women with full disability pension and anxiety/depression or FMS as first (primary) diagnosis as basis for disability claim.

Number of diagnoses per person	Anxiety/depression as primary diagnosis		FMS as primary diagnosis	
	Number	Percentage	Number	Percentage
1	170	17.6%	49	16.6
2	270	27.9%	116	39.2
3	242	25.0%	80	27.0
4	146	15.1%	27	9.1
5	89	9.2%	13	4.4
6	27	2.8%	7	2.4
7	14	1.4%	3	1.0
8	7	0.7%	1	0.3
9	2	0.2%	0	0.0
10	1	0.1%	0	0.0
Total	968	100.0%	296	100.0

Table 5: The number of diagnoses registered for women with full disability pension and three serious, disabling diseases as first (primary) diagnosis as basis for disability claim.

Number of diagnoses	Schizophrenia		Multiple sclerosis		Rheumatoid arthritis	
	Number	Percentage	Number	Percentage	Number	Percentage
1	83	66.7	96	79.3	119	51.1
2	34	18.6	16	13.2	51	21.9
3	15	8.2	6	5.0	33	14.1
4	9	4.9	3	2.5	18	7.7
5	2	1.1	0	0.0	7	3.0
6	0	0.0	0	0.0	3	1.3
7	1	0.5	0	0.0	2	0.9
Total	183	100.0	121	100.0	233	100.0

multiple sclerosis, rheumatoid arthritis, three serious disabling conditions with widespread effects and uncertain etiologies. Distributions in these three

conditions showed a similar tendency toward fewer secondary diagnoses, unlike the distribution patterns of FMS and "anxiety/depression."

Discussion

Everything about Fibromyalgia Syndrome (FMS) engenders controversy except for the suffering it causes and the



isolation, frustration, and marginalization of FMS patients need to be addressed by the clinicians. Because of the absence of a known etiology or consistent laboratory markers, FMS has been classified in many ways. Since the most commonly used diagnostic criteria are based primarily on the elicitation of tender points³³ the disease is most consistently classified as rheumatologic. On-going research suggests to some that the disease represents a dysfunction of neurological or neuroendocrine systems. The common association of chronic, debilitating conditions with psychiatric diagnoses, and overlapping diagnostic criteria have made classification of FMS as a psychiatric illness difficult and controversial. *Uncertain classification has implication for consultation, treatment, research, and determination of impairment and disability.*

The data set employed in this study lend support to classification of FMS as a mental disorder, most consistently a manifestation of a generalized anxiety disorder (GAD). Comparisons of frequency distributions of numbers of attendant, secondary diagnoses support a strong association between FMS and GAD. A comparison of secondary diagnoses by disease category also most closely matches the “mental disorder” category and the Registry classification of “anxiety/depression.” Frequency distributions of attendant, secondary diagnoses for schizophrenia, multiple

sclerosis, and rheumatoid arthritis are poor matches for the pattern seen with FMS and GAD.

There is a body of medical literature to support classification of FMS as a psychiatric diagnosis associated with the anxiety disorders.^{2,8,23} Peer reviewed literature suggests a strong associations of FMS with co-morbid conditions which are strongly linked to anxiety and stress, such as irritable bowel syndrome, irritable bladder syndrome and tympanomandibular disorders.^{21,22,23,34}

Others document the high prevalence of specific mental disorders in patients with FMS.^{19,24,27,35,36} Other authors have attempted to demonstrate a lack of correlation of FMS with other diseases more firmly established as rheumatologic.^{2,25,37}

Classification of FMS must also consider the significant sex difference disparity, which is reported consistently by researchers and confirmed in this study. A number of rheumatologic conditions, such as rheumatoid arthritis and systemic lupus erythematosus, show consistent female predominance. These are often attributed to underlying hormonal, genetic, vascular, or immunologic factors. A consistent sex difference disparity has also been observed for generalized anxiety disorder.³⁸ Sex differences in the rates of these disorders may be related to different social roles of men and

women, especially when such factors are important in the culture studied.^{39,40}

Supporting documentation for patients applying for disability pensions obviously must list diagnoses to justify the application. Societal prejudices against mental and behavioral disorders may influence physicians’ decisions to make the more “respectable” diagnosis of FMS.⁶

Some authors propose new classification systems for FMS and similar conditions. These include categories such as “functional disorders,” “widespread pain,” “disorders of pain modulation,” and “functional somatic syndromes.”^{2,18,19,26} It would appear that such new classifications would be helpful and consistent only if the conditions classified shared etiologic or laboratory elements.

This study supports the notion that classification of Fibromyalgia Syndrome should be thoroughly examined using available epidemiological tools, data sets and population studies.

Classifications that are based on legal or politically correct construction are ill serving to patients, physicians, or society at large. Until a firm etiology or consistent markers are found, the syndrome should be classified on best available scientific evidence.



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Neuropsychological Assessment: Psychometric and Clinical Issues

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Abstract

This article represents the first of a two-part series dealing with psychometric and clinical issues of neuropsychological assessment. The first article focuses on the underlying principles of neuropsychological assessment and includes discussion of brain-behavior relationships, test reliability and validity, and normative data. This article will also address pertinent issues of neuropsychological assessment including referral questions, selection of a neuropsychologist, establishment of premorbid functioning and identification of factors other than brain injury that might affect neuropsychological test scores. The second article examines neuropsychological assessment of specific cognitive processes such as attention, memory, motor, language, executive, visual spatial and tactile functioning. Finally, the authors will describe patterns of neuropsychological testing associated with common brain injuries including traumatic brain injury, anoxia, toxin exposure, and substance abuse.

Neuropsychological Assessment: Basic Principles and Clinical Issues

Brief History of Neuropsychology

Neuropsychology, which has its origins in the fields of psychology, neurology and neurophysiology, is best described as the study of the brain and its relationship to mentation and behavior (Benton, 2000). The study of brain-behavior relationships can be traced back almost 2000 years (Pagel, 1958). However, because of its multiple origins, the field of neuropsychology, per se, is relatively new. Prior to its emergence as a new discipline, neuropsychology was generally subsumed under the umbrella of Clinical Psychology. The term "neuropsychology" was first used by William Osler in 1913 but did not gain its current association until the 1950s (Bruce, 1985).

Theoretical Basis of Neuropsychological Assessment

Neuropsychological testing is a valid and sensitive measure of brain



dysfunction. Rather than measuring brain structure or metabolism as modern radiographic techniques, neuropsychological testing assesses brain functioning by examining brain output in terms of behavior and mentation. By examining how the brain deals with various aspects of information processing, neuropsychological testing can often detect subtle changes in brain functioning sometimes not visible in present radiographic techniques. This increased sensitivity can be especially important in dealing in cases of mild traumatic brain injury where microscopic axonal shearing, while having an impact upon cognition, may not be detectable with traditional radiographic measures.

Generally, research involving both neuropsychological testing and radiographic studies indicates a positive correlation between neuropsychological test findings and radiographic results of studies (e.g., CT, MRI, PET and SPECT imaging) of brain lesions (Ichise et al., 1994;Wallesch, et al., 2001). In fact, in many cases, neuropsychological test results often serve as the established criterion in concurrent validity studies. In some cases, neuropsychological testing may identify subtle changes in cognitive functioning not identified in radiographic imaging studies.

In addition to confirming the presence of brain dysfunction, neuropsychological test scores can also be valuable in describing the nature of the deficit and how it affects the person's adaptive functioning capabilities. Finally, neuropsychological testing can assist in the development of recommendations for remediation and rehabilitation (Spreeen & Strauss, 1998).

While the measurement of behavior and mentation provides neuropsychological assessment with increased sensitivity in identifying brain dysfunction, it also can also lead to false positive or false negative findings when output is affected by factors other than brain damage. What might be surprising to the reader is that while sensitive to brain injury, neuropsychological assessment does not measure brain damage, per se; at least not in a direct manner like that of a brain imaging study such as a MRI, CT or SPECT scan. Rather, neuropsychological testing examines cognitive performance or the application of brain functioning to cognition and adaptive functioning abilities. During a neuropsychological test a person is asked to perform a certain task, (e.g., learn a list of words, tap a lever, solve a problem) and, based on the quality of their performance and our knowledge of brain anatomy and functional organization, a probability

statement is made regarding brain functioning.

While this method of assessment allows for the detection subtle changes in brain functioning, this increased sensitivity can also result in increased false positives, i.e., reporting of brain damage where none exists (Retzlaff & Gibertini, 1994). For example, central nervous system control of finger tapping speed for each hand is controlled largely by the contralateral motor area of the brain. Thus, the finding of significant discrepancy in finger tapping speed between the two hands might be indicative of lateralized brain damage. However, finger tapping speed may also be influenced by a number of other factors including motivation (e.g., depression), peripheral nerve injury in the hand or arm, etc. (e.g., neuropathy) or other factors. False negatives, i.e., the reporting of no deficits when deficits actually exist, is also an area of concern and must be considered when interpreting neuropsychological test data. Thus, it is important that the neuropsychologist consider a number of factors in addition to test scores in their interpretation of test results. Thus, the results of neuropsychological tests can be influenced by non-brain factors including language, culture, psychopathology and past experience (see below) that must be considered by the neuropsychologist.



Psychometric Issues in Neuropsychological Assessment

Reliability and Validity:

Neuropsychological tests, like all measurement tools (e.g., speedometer, ruler, MRI), result in a score that is comprised of two components: true measurement of the desired object and error. The assessment of the consistency of the test score is called a reliability coefficient (i.e., numbers that range from 0-1.0 with higher numbers indicating increased reliability). Obviously, it is important that the neuropsychologist be aware of the psychometric properties of the test and only use tests with acceptable reliability. This is particularly important since there is considerable range in reliability of various neuropsychological tests. For example, the Wechsler Adult Intelligence Scale-III has excellent reliability for the I.Q. scales and indexes with coefficients ranging from .88-.97. However, other tests such as the Finger Tapping Test have more variable reliability with Lezak (1995) citing research reporting reliability coefficients of .04-.94. Still other tests like the Three-Dimensional Block Construction test report no reliability estimates (Spreen & Strauss, 1998), making it impossible for the

neuropsychologist to evaluate the reliability of the test.

While having an acceptable level of reliability is crucial in the use of any neuropsychological test, the test must also be valid (i.e., measure what it purports to measure). A test may in fact be reliable but not valid. For example, the Wechsler Memory Scale-R Visual Reproduction subtest is classified as a measure of visual memory. However, the test may actually be more of a measure of construction and visuospatial reasoning than memory. While consideration of reliability and validity are the responsibility of the neuropsychologist performing the evaluation, it is important for the medical professional to be aware of these issues when reviewing neuropsychological reports.

Normative Data:

Without acceptable reliability or validity, neuropsychological test scores are of little use in providing the clinician with meaningful information. However, there is another key component in understanding what any score means for a particular patient: normative data. Normative data or “norms” view the test score in terms of the person’s demographic characteristics to determine if the performance is average or represents a

strength or weakness. For example, if you knew that a person could lift a maximum of 25 lbs with one hand, it would be hard to determine if this person was strong or weak. If this person were a 10-year old girl they might possess considerable strength compared to their peers. However, if this person were a 25-year old professional football player they would be considered quite weak.

Neuropsychological test norms must take into account a number of different demographic factors including age, gender, education and race/culture. For example, a 35-year old who obtained a raw score of 74 on the WAIS-III Digit Symbol subtest would achieve a scaled score of 10 (50 percentile). However, the same score for an 80-year old person would result in a scaled score of 16 and correspond to the 97th percentile (Wechsler, 1997). Thus, demographic variables can play a significant role in the interpretation test scores.

While most test authors provide normative data, the quality and diversity of their normative samples vary considerably. For example, some tests like the Wechsler scales have stratified national samples consisting of thousands of individuals in their normative groups. Other tests, however, such as the Bells Test (visual



neglect) have normative samples of less than 100 subjects.

There are other sources of normative data besides test manuals. Normative data for specialized populations can often be found in published research. While these sources can be useful, it is important that the neuropsychologist carefully understand the methodology of the research before applying the norms to a particular patient. There are also sources that provide normative data for a large number of tests, some of which take into account age, gender and education variables (Heaton et al. 1992; Spreen & Strauss, 1998).

Pragmatics of the Neuropsychological Evaluation:

Selection of a Neuropsychologist:

Much like physicians, psychologists are licensed through the state in which they practice. However, there is no specific licensure as a neuropsychologist, forensic psychologist, etc. Generally, a neuropsychologist is a psychologist with specialized training in brain-behavior relationships as well as the administration and interpretation of neuropsychological tests. This training can take place through didactic instruction and clinical supervision in the specialized area of neuropsychology

at the graduate and postgraduate levels of education. Although a more recent development in the field of neuropsychology allows for board certification (e.g., American Board of Professional Neuropsychology or the American Board of Clinical Neuropsychology), many highly qualified professionals working in the area do not go through the certification process. It is important to note that board certification in psychology is not required or as widespread as in medicine.

Clinical Issues in Neuropsychological Assessment

Clinical Interview:

Generally, a comprehensive neuropsychological evaluation is composed of two parts: 1) the completion of a comprehensive clinical interview; and 2) the administration of formal neuropsychological test instruments. The clinical interview portion of the examination is important because it allows the clinician to gather relevant background information and to obtain a clear picture of the individual's current adaptive functioning capabilities. It is important to develop an idea of an individual's past level of cognitive abilities so that they can be compared to the current capacities. For

example, if a patient achieved an IQ score of 100 (Average range), this does not necessarily mean that he or she has suffered no loss of IQ from the brain injury. In fact, the patient may have been very bright and had a premorbid IQ score of 120 (Superior range). Therefore, it is important that the neuropsychologist attempt to ascertain an assessment of the patient's cognitive abilities prior to the issue in question.

Estimating Premorbid Functioning

Unfortunately, the neuropsychologist rarely has the luxury of premorbid testing to establish baseline abilities with which to compare present results. Therefore, the neuropsychologist must establish an estimate of premorbid functioning.

Neuropsychologists use a number of methods for establishing premorbid functioning that generally fall into two categories: historical approach and present ability approaches. The most basic historical approach involves the use of academic transcripts and occupational history to estimate the persons past level of functioning. While grades themselves may be misleading, these transcripts sometimes contain achievement test scores with national norms that can shed light on various aspects of cognitive functioning. Research has shown that education and



occupation both correlate with IQ (Matarazzo, 1972).

There are also actuarial methods of establishing premorbid functioning levels. These methods use regression statistics to develop estimates of premorbid functioning based on a number of variables (Barona et al., 1984; Crawford et al., 1989; Wilson et al., 1978) and have the advantage of not being dependent upon present abilities. However, actuarial prediction is not perfect and predicted scores can have large standard of errors (Doerr & Carlin, 1991).

Estimates of premorbid functioning can also be made from the patient's performance on current test measures. This strategy looks at the patient's pattern of performance across current tests. This method presumes that some measures called "hold tests" are more resistant to brain injury than others. This approach has been criticized in that while some cognitive abilities may be less vulnerable to acute brain injury, all tests can be affected by brain damage. However, it does appear that current performance on certain (e.g., vocabulary) tests may establish at least a lower limit of premorbid ability (Doerr & Carlin, 1991).

Testing Approach

In terms of the actual neuropsychological tests employed, one of the basic differences between professionals in the field is related to whether they employ a fixed versus flexible battery approach to testing. In the fixed battery approach, a complete test battery such as the Halstead-Reitan Neuropsychological Test Battery is administered. Fixed batteries have specific tests that are defined by the battery, always administered and cover a variety of cognitive functions. In the flexible approach, the neuropsychologist usually has a core number of tests that are augmented with other tests, depending on the clinical issue. While each approach has certain strengths and weaknesses, either method is acceptable, with most neuropsychologists employing a combination of fixed and flexible measures (Goldstein, 1997). The two most critical issues involve the experience and expertise of the professional rendering the services and the reliability/validity of the selected tests.

Review of Records and Collateral Data

As part of the evaluation process, it is important that the neuropsychologist has access to a variety of medical, academic and occupational records if available. These should include any

records surrounding the injury, neurological and radiographic findings, and prior or subsequent psychological or psychiatric evaluations and medical treatment. These sources are important in verifying information given by the individual patient. Family, friends, coworkers, etc. can also provide useful information.

Neuropsychologists, when possible, should also attempt to obtain assessments of the patient's functioning from collateral sources such as family members or close associates. While this information must be taken in context, such sources can provide the evaluator with accounts of pre- and post accident changes. In situations where actual interview is not feasible, there are inventories that family members can fill out to describe cognitive, emotional, and personality changes in the patient. While it is often difficult to obtain exhaustive records or interviews, it can prove helpful for the neuropsychologist to gather information independent of the patient interview and test data whenever possible.

Assessment of Non-Neurological Factors Affecting Neuropsychological Test Scores

As previously noted above, neuropsychological tests assess brain



functioning through the examination of mentation and behavior. However, these functions can be influenced by a number of factors that are independent of the brain injury and must be considered. These factors can include, for example, peripheral nerve injury, associated medical conditions, patient motivation, secondary gain, associated psychopathology and culture. Thus, it is important that the neuropsychologist be aware of these factors and account for them in the interpretation of test results.

One obvious factor that can influence neuropsychological test scores is that of patient motivation. In most cases, healthcare professionals assume that patients are being honest regarding their symptoms and that they are motivated to give their best effort during testing. However, brain injury cases often take place within the medicolegal context where patients may be invested in exaggerating or feigning cognitive deficits and symptoms. Therefore, it is important that neuropsychologists employ specific symptom validity or response bias measures. Recently, there has been increased emphasis on the detection of sub-optimal responding and the development of increasingly sophisticated response bias tests. There are a number of these measures currently available that rely on forced choice or item difficulty formats (Etkoff & Kampfer, 1996; Slick, 1999). By

comparing the patient's performance to normative data from normal and verified brain impaired populations, these tests can assist in determining whether the patient put forth maximum effort.

Neuropsychological test scores may also be affected by associated or independent psychopathology.

Numerous psychiatric diagnoses such as thought disorders, mood disorders, substance abuse disorders, can, in certain cases, have an impact on neuropsychological functioning (American Psychiatric Association, 2000; Basso & Bornstein, 1999; Lezak, 1995; Merriam, et al., 1999; Reitan & Wolfson, 1997).

Finally, neuropsychologists must also be cognizant of any medications taken by the patient either before or during the evaluation. A number of medications can have a deleterious effect on cognitive functioning including many tricyclic antidepressants, anticonvulsants, antipsychotics and pain medications (Medical Economics Company, 2001). While having the patient, under medical supervision, discontinue the medication prior to assessment may seem like a reasonable solution, doing so can often lead to an increase in medical symptoms that may also impact testing.

Summary

Neuropsychological assessment is a valuable tool in providing information regarding the nature, functional consequences and rehabilitation in brain injured patients. However, it is important that the person conducting the evaluation have specific training in neuropsychological assessment. The neuropsychologist should use reliable and valid tests with appropriate norms for interpretation of test results. It is important that an estimate of premorbid functioning be developed to provide a baseline for interpreting test results and that the neuropsychologist consider the influence of other factors independent of brain injury, such as motivation and other medical and psychological factors, that may have an impact upon test functioning.

In the next issue we will examine the specific neuropsychological tests used in the assessment of specific cognitive processes such as attention, memory, motor, language, executive, visual spatial and tactile functioning. Additionally, we will examine patterns of neuropsychological testing commonly associated with brain injuries including traumatic brain injury, anoxia, toxin exposure, and substance abuse.



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Facial Pain

The Challenge of Evaluation and Treatment

Joseph R. Spiegel MD, Steven Mandel, MD, Ernest Baron, MD

Introduction

Patients with facial pain can present many diagnostic and management challenges. There are multiple, varied organ systems and structures in the head and neck with a complex network of efferent, afferent, visceral, and autonomic nerves. Pain can occur in a direct pattern from the affected structure or it may occur in a radiated distribution.

The superficial anatomy of the face includes the skin, subcutaneous tissue, mimetic and mastication musculature. In the mid-face and intraorally, sensation is via the trigeminal nerve. Laterally, sensation is via the auriculotemporal nerve and greater auricular nerve branches; both derived from upper cervical nerve roots (C2 and C3). Pain can result from many different pathologies ranging from infection and inflammatory processes such as vasculitis to trauma and malignancy. This review cannot cover the full scope or pathologic conditions that cause facial pain, but the most common conditions will be covered.

Pain syndromes involving the muscles of mastication often involve dental and TMJ pathology. The deeper bony structures include the mandible, the maxilla, the orbits and the frontal bone. The maxilla can be divided clinically into the alveolar (tooth bearing) process, the maxillary sinus and the zygoma. The ethmoid, frontal, and sphenoid bones hold the other paranasal sinuses. The bony structures are sources of pain when affected by trauma, malignancy and rarely osteomyelitis. The paranasal sinuses are lined with respiratory mucosa and require adequate drainage and airflow into the nasal cavity for normal function. Sinus pain secondary to chronic mucosal inflammation and infection is common. Sinus malignancy is rare, but often presents with local or radiated pain. The temporomandibular joint is in the lateral face, in the deep preauricular tissue. Dental pathology is perhaps the most common cause of facial pain. Most pain is local to the dental source. But, complications of dental pathology and iatrogenic nerve injury during treatment can result in more generalized facial pain. The TMJ is a synovial joint with complex motion.

Pain from TMJ abnormalities can be direct, radiated or related to associated musculature and ligamentous structures. Pain in a facial distribution can result from pathology anywhere along the course of the trigeminal nerve. This includes the brainstem nuclei, the nerve root zone, the course of the nerve through the middle cranial fossa, the anterior skull base, the pterygomaxillary space, the maxillary canal, and the peripheral distribution.

Evaluation

Evaluation of patients who present with facial pain symptoms requires a detailed examination of the head and neck. Neurologic examination is based on the cranial nerve distribution. Most important is testing of trigeminal nerve function. Sensory testing includes pinprick, light touch, and cold compared on both sides of the face in the three trigeminal divisions. Note is also made if testing of any stimulus produces pain. Intraoral and intranasal surfaces should also be evaluated, and the corneal reflex is tested bilaterally. The motor divisions of the trigeminal nerve innervate the masseter, temporalis



and pterygoid muscles. The temporalis and masseter can be palpated during contraction, and measuring jaw strength can test all three muscles. Other associated cranial nerves (CIII, CIV, CVI, and CVII) can be tested by observing facial and ocular motion. Endoscopic examination of the nose and pharynx is indicated if initial examination and testing fails to yield a diagnosis or if diseases of the nasal mucosa, paranasal sinuses or pharynx are suspected. Taste and olfactory screening is occasionally indicated.

The most important radiological evaluation is MRI and MRA studies of intracranial structures and CT scanning for the bony anatomy. These can demonstrate intracranial pathology and the MRA can show many of the vascular loops that cause trigeminal pain from compression of the nerve root. MRI is the primary study to evaluate the TMJ. Inflammation of the trigeminal nerve can occasionally be determined with MRI with gadolinium enhancement techniques that show nerve enhancement. MRI is highly sensitive for mucosal inflammation and tumor invasion of soft tissues. If inflammatory disease of the paranasal sinuses is suspected on an MRI, CT scanning is indicated. CT is the most specific study to define sinus disease and it is required to define traumatic injuries, bone erosion and congenital anomalies. Nuclear scans are occasionally useful if

osteomyelitis or metastatic neoplasm is suspected. (bone scan).

Trigeminal SEP's (TSEP's) have been shown to assess the electrophysiologic properties of trigeminal afferents and can be performed with a high degree of accuracy, reproducibility and sensitivity.¹ The ophthalmic, maxillary and mandibular divisions of the trigeminal nerve can be stimulated and ipsilateral, mastoid and contralateral scalp recordings can be obtained. Analysis of TSEP's has been helpful in assessing tumors of the base of the skull, trigeminal neuralgia and monitoring microvascular decompression surgery for trigeminal neuralgia.^{2,3,4} EMG of the blink reflex can be useful in differentiating CV and CVII lesion and in determining central versus peripheral pathology.

Certain blood tests can be helpful. CBC of course important in the evaluation of acute and chronic infection as well in assessing the effect of a chronic disease state. More specifically, sedimentation rate (ESR), anti-nuclear antibody (ANA), and anti-cholinesterase (ACE) level are used to screen for temporal arteritis, connective tissue diseases, and sarcoidosis, respectively.

Clinical Syndromes and Treatment

Trigeminal Neuralgia

Trigeminal neuralgia is the most common neurologic diagnosis in patients with facial pain. The International Association for the Study of Pain defines trigeminal neuralgia as "a sudden, usually unilateral, severe, brief, stabbing, recurrent pain in the distribution of the fifth cranial nerve." Trigeminal neuralgia, also known as *tic douloureux*, is paroxysmic and very severe. Triggers can include light cutaneous stimulus on a very localized spot on the face (trigger zone). Patients with Idiopathic trigeminal neuralgia can have remissions with or without treatment.

Secondary trigeminal neuralgia or symptomatic trigeminal neuralgia occurs with pathologic processes involving the trigeminal nerve, including but not limited to MS plaques, posterior cranial nerve tumors, Arnold-Chiari malformations, pontine infarctions and other mass lesions. This is why MRI scans should be performed in patients with suspected trigeminal neuralgia, to rule out symptomatic causes. Other paroxysmal pain disorders that could be confused with trigeminal neuralgia include glossopharyngeal neuralgia, Raeder syndrome, atypical facial pain and cluster headaches. A careful history and physical examination will often



distinguish these syndromes, as the other investigative studies are often negative.

Etiologies of secondary trigeminal neuralgia include demyelination of the trigeminal sensory fibers within ophthalmic, maxillary and mandibular divisions, and less likely in the brainstem. There may be compression by an overlying artery or vein, most commonly superior or anteroinferior cerebellar arteries. This can lead to ectopic triggering of neuronal discharges.⁵ Abnormalities of the trigeminal nerve may be caused by the afferent neurons where its axons and axotomized stomata are hyperexcitable, resulting in synchronous after-discharge activity.⁶ When the lesion is within the brainstem, long track signs such as hyperreflexia as well as other distant neurologic signs are usually found.

Treatment of trigeminal neuralgia includes medication, primarily carbamazepine. However, other antiepileptic drugs have been found to be of benefit including topiramate, lamotrigine, phenytoin, sodium valproate, and clonazepam. Baclofen is an alternative medication shown to be effective in a number of patients. Approximately 75% of patients will have an response to medical treatment initially.⁷ Side effects of the most commonly prescribed drugs, antiepileptics and tricyclic antidepressants, include drowsiness and

cognitive impairments, as well as individual hematological, renal and teratogenic side effects. Surgical treatment includes cryotherapy, radiofrequency trigeminal rhizotomy, microvascular decompression and gamma knife radiosurgery. Microvascular decompression has resulted in long term pain control in 80% of patients with typical trigeminal neuralgia, but only in 51% of patient with atypical trigeminal neuralgia.⁸ Gamma knife surgery applied to patients with secondary trigeminal neuralgia has yielded similar success rates in long term pain control.⁹

Other Facial Pain Syndromes

Postherpetic facial neuralgia occurs in up to 35% of patients after healing of the herpes zoster rash (shingles). The acute herpetic infection, known as Ramsay Hunt syndrome, may be on the skin of the external ear or the ear canal with the varicella virus in the geniculate ganglion of the ipsilateral facial nerve. Transient facial nerve paresis is common during the acute infection and permanent motor deficits are possible.

Facial pain and headache related to chronic sinusitis is usually perceived in the malar, intranasal and glabellar distributions. Maxillary dental pain is also common. Frontal and bitemporal headaches are less likely and vertex or occipital pains are least likely related to

sinus pathology. The sinusitis patient will usually complain of other symptoms including nasal congestion, rhinorrhea, postnasal drainage, decreased sense of smell and taste, and general fatigue. Medical treatment with decongestants, antihistamines, directed antibiotics and anti-inflammatories should result in at least transient relief of the facial pain or headache. Endoscopy can show suggestive signs such as polyp growth or mucopurulent sinus discharge, and a non-enhanced CT scan of the sinuses is the best study to show chronic inflammatory changes. MRI is useful when evaluating fungal infection, neoplasm and in cases of orbital or intracranial involvement. If a patient with facial pain has CT or MRI evidence of chronic sinus inflammation or obstruction and fails medical treatment, surgery should be considered. Functional endoscopic sinus surgery has an approximately 85% success rate in the treatment of sinus related pain.¹⁰ However, it is critical that sinus pain be delineated from other headache or facial pain syndromes preoperatively.

If evaluation of the paranasal sinuses fails to demonstrate an etiology of facial pain, other local syndromes require investigations. Sphenopalantine neuralgia results in pain felt in the medial orbital and glabellar areas with occasional radiation to the temple. It can be secondary to direct contact and stimulation of the middle nasal



turbinate (Schluter's Syndrome).¹¹ When this is the case, it can be temporarily relieved with topical application of decongestant and anesthetic preparations, and it can be treated with surgical correction of the nasal septum. Other similar headache syndromes can result from damage to the nerves from chronic infection, chronic inflammation or trauma. These can be diagnosed and treated with selective sphenopalantine blockade in some cases.¹² Eagle's syndrome produces primarily throat pain and is related to an elongated styloid process. However patients with Eagle's syndrome can develop upper neck and jaw pain that can be confused with some dental and TMJ pain syndromes.¹³

Other differential diagnoses include tension headache, cluster headache, migraine and post-concussive headache. Temporomandibular joint abnormalities rarely lead to central facial discomfort but they can cause otalgia, pain radiating from the TMJ, and temporal headache. Since most TMJ syndromes are associated with dental abnormalities or bruxism, an adequate dental examination is required, and MRI scanning is useful to evaluate the joint structure.¹⁴ Treatment with dental splints, appropriate dental management and local blocks will often yield at least transient pain relief.

When a specific local or intracranial etiology of facial pain is not found it is

termed atypical, as a diagnosis of exclusion¹⁵ Treatment of atypical facial pain is often complex and requires a multidisciplinary approach. Psychiatric evaluation should be considered in the diagnosis and management of all patients with atypical facial pain as depression and anxiety are common associated diagnoses. Treatment of atypical pain includes tricyclic antidepressants (used for their analgesic effects at low dose ranges), anti-epileptic drugs (usually gabapentin or topiramate), and narcotic and non-narcotic analgesics. Local blocks to distal trigeminal nerve branches and sphenopalantine blockade are occasionally useful.

Impairment Evaluation

Facial pain causes impairment by limitation of the patient's oral diet, limitation of speech, reduced tolerance of exposure to temperature, pressure and other environmental variations and cosmetic deformities in addition to the impairments related to all pain syndromes. Speech, deglutition and animated facial motion result in potentially almost constant stimulation of facial and perioral tissues. When pain can be stimulated in the facial tissues, the near constant motion can amplify the intensity and frequency of related pain.

"The criteria for cranial nerve V (trigeminal nerve) dysfunction now

emphasizes the importance of determining the impact on ADL before assigning an impairment rating."¹⁶ Under Section 13.4d, one is referred to Section 13.9, Criteria for Rating impairment of Peripheral Nervous System. One is then asked to evaluate motor and sensory impairments in a similar way to the evaluation of an upper extremity impairment, i.e., Tables 16-10 and 16-11, Determinations of Sensory Deficit or Pain and Motor and Loss of Power Deficits respectively. But, as opposed to Table 16-5, which is Maximum Upper Extremity Impairment Due to Unilateral Motor or Sensory Deficits, one is not given a maximum number as related to the trigeminal nerve. Thus the 5th Edition of the *AMA Guides to the Evaluation of Permanent Impairment* is deficient in that there is no method to determine a level of impairment for reduced sensation or limited motor function in the trigeminal distribution. Loss of sensation can lead to corneal damage with loss of visual acuity, dental injury or soft tissue injuries of the face. Motor loss can lead to impaired mastication and speech. These impairments must be rated by referring to the sections in the Guides that refer to the specific organ systems (i.e. vision loss, dysphagia, speech impairment).

The examples 13-34 and 13-35 refer solely to table 13-11 for rating of the trigeminal nerve pain. Referring to Table 1-2, Activities of Daily Living, one is



asked to evaluate cranial nerve V based upon its effect on activities of daily living as a measure of the degree of pain.¹⁷ Under Class 3, it indicates severe uncontrolled unilateral or bilateral facial pain. Class 1 and 2 do not specifically indicate unilateral or bilateral. This is only indicated under Class 3. It is very unusual to have bilateral trigeminal neuralgia, but under those circumstances (which one may never see), one would need to combine unilateral impairments using Table 13-11. One might combine Class 1 on one side of the face with Class 2 or 3 on the opposite side of the face.¹⁸ Additionally, if the evaluator feels that Class 3 does not adequately rate the effects of the facial pain in a patient with objective abnormalities in the trigeminal

distribution, an additional 1-3% may be added to the overall ADL impairment.

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Book Review

Independent Medical Evaluations.

Editor: Thomas Grace, M.D., American Academy of Orthopedic Surgeons, Rosemont, IL: 2001. 93 pages.,

Reviewers: Rebecca McGraw, M.D., Mohammed I. Ranavaya, M.D., MS, FRCPI, FFOM, FAADEP, CIME

The preface of this book appropriately introduces it as a guide to the entire Independent Medical Evaluation (IME) process, not just as a guide to aid in determining Impairment Ratings (IR) only. The book succeeds in this bold assertion to serve as an aid in understanding the broad IME process, and for this reason, it could be a useful companion to the *AMA Guides to the Evaluation of Permanent Impairment*. The forward (sic) contains a thoughtful discussion of the medical/legal interplay in the IME arena.

Chapter 1: The Independent Medical Evaluation, is very nuts and bolts. For example, it discusses such practical matters as who gets the IME report, who pays for it, and the uses of Functional Capacity Assessments. Various biases and legal perspectives – both plaintiff’s and defendant’s – are explained and summarized.

Chapter 2: Independent Medical Evaluation: An Organization and Analysis System gives practical advice. This chapter is a step-by-step guide to performance of the IME, from scheduling to the specific elements to be contained in the IME report itself. It includes sections on History, Physical Exam, Impressions,

Causation, Work Status Analysis, Maximal Medical Improvement (MMI), and IR. The chapter offers tips on determining causation and work status analysis, and it includes useful reproducible forms for these topics as well as the other topics in the section. The MMI and IR sections in this chapter were small, emphasizing that the book is not a replacement for, but only a potential companion to, *The AMA Guides*.

Chapter 3 is devoted to the written report. The chapter underscores the importance of a quality report. It lists and describes necessary elements of quality reports and disclaimers, and gives sample disclaimers. Though the book does not endorse any one specific format for the written report, it comments on elements necessary to the report, and it gives examples of several reports for both workers’ compensation and personal injury cases. The chapter mentions inclusion of Waddell’s signs or other tests for nonorganic pain, somatization, or malingering.

Chapter 4: Impairment and Disability is an excellent chapter, and it is succinctly presented. It reviews crucial concepts for the Independent Medical Examiner

and/or physicians interested in certification by ABIME. The chapter contains a superb section on MMI; it expands the discussion of MMI beyond that of *The AMA Guides*. It offers injury specific estimates of recovery times and discusses in some detail the important concepts of maintenance treatments and new treatments; to this end, the controversial issue of distinguishing experimental from standard treatment is discussed, but no conclusions are offered. The chapter also contains a good discussion of the factors involved in employability, capacity, and risk.

Chapter 5: Causation and Apportionment, again meets the task of providing practical definitions. For example, the chapter explains what is meant by a “reasonable degree of medical certainty” versus “medically possible.” It discusses the important distinction between aggravation and exacerbation. There is a section on the topic of work relatedness of occupational diseases and cumulative trauma disorders/repetitive strain injuries. It lists the occupational risk factors for carpal tunnel syndrome. This is another very important chapter which tackles some of the more controversial issues associated with IME’s. The book



indeed may well be worth itself if only for Chapters 4 and 5.

Chapter 6: Malingering and Somatization details the tests for nonorganic pain, somatization, and malingering. It also cautions that there are some limitations in using them. The concept of coefficient of variation and how this reflects scientific validity of an exam is explained. This chapter contains important clinical information for ABIME members and Independent Medical Examiners.

Chapter 7: Testimony of an Expert Witness was written by an M.D. with a law degree. Though the chapter is brief, and perhaps more is written on the subject elsewhere, it contains useful information and tips on testimony and what to expect from both direct and cross examination. It is a useful chapter for physicians involved in – as discussed in

the foreword – the medical/legal environment of the IME.

The book comes with a CD-ROM which contains the forms shown and described in the text. The forms assist with a range in functions from scheduling the IME to performing the exam to reporting the conclusions. As previously mentioned, these forms could be useful for organization and presentation of the IME. The CD-ROM also demonstrates eliciting Waddell's signs on physical exam. While the Waddell's criteria were each addressed on the CD, their demonstrations might have been better organized in the CD. This was perhaps the only limitation of the CD.

One strong suit of the CD-ROM was the demonstration of musculoskeletal tests and measurements. The segments showing hands on demonstrations of musculoskeletal system measurements

were very instructional, and they present these techniques in ways in which many physicians undergoing IME training may not have previously been privy. For this reason, the CD-ROM could be very of great use to physicians in the learning stages of the IME process.

In summary *Independent Medical Evaluations* would be a useful addition to the library of any Independent Medical Examiner, ABIME member, or physician who deals with many workers' compensation or personal injury cases. The information contained in the book is integral for understanding the broad IME process. The book is relatively brief and reader friendly and a steal at the price offered. It could serve as a valuable companion to the *AMA Guides to the Evaluation of Permanent Impairment*.

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Book Review

Interactive Spine Software CD.

Published by Primal Pictures Limited, London, UK

Website: www.primalpictures.com

Reviewer: Mohammed I. Ranavaya, M.D., MS, FRCPI, FFOM, FFADEP, CIME

Technology is increasingly affecting the practice of disability medicine and growing availability of electronic media and software geared to Independent Medical Examiner and expert witness to deliver information to their clients surely will change the face of the business.

The Interactive Spine is part of our series of five CD software depicting a particular part of human anatomy such as knee, hip, shoulder, etc., in 3-D and is a unique new teaching, training and reference tool. This anatomy and clinical pathology software uniquely features a 3-D computer graphic models of the human spine. All of the CDs submitted were reviewed and anatomical features in greater detail and higher resolution in three dimensions were found to be impressive. The fascinating feature is the peel away of over 20 layers from skin to bone and the ability to rotate the image at any stage is a true three-dimensional understanding.

One of the great achievements of this software is that you can also correlate the views of the model with multi planner MRI. The spine CD includes an anatomical fully detailed model of the

entire vertebral column and spinal cord. Detailed views of the deep muscles of the back including the neurovascular system and contents of intervertebral foramen, rarely seen in conventional text are brought to life in this 3-D unique new teaching, training and reference tool.

The program splits the disc into five distinct sections, allowing the user quick and easy access to each part. To swap between each section on the disc, anatomy is the main section of the disc and shows various views of the 3-D model alongside the related text.

This fascinating work also includes MRI, x-ray, CT and photographs that are linked to fully labeled axial CT of the entire spine. There are fully labeled dissection slides as well. The authors of the remarkable achievement have impressive credentials in the field of orthopedic surgery, anatomy and neurosurgery.

There is a quiz section that allows you to test yourself on your knowledge of spine or the other anatomical parts. You can even set the quiz to test your prowess in surgical anatomy on different layers, different type of

question and two different grades of difficulty. The course keeps the toll of correct and incorrect answers and a summary of this is shown at the end. There is also a test section that allows you to test yourself using standard multiple-choice questions.

In summary, the interactive software is a complete and accurate anatomical reference-in three dimensions. The CD ROM goes beyond any traditional textbook. Users can rotate a 3-D model on a computer screen, peel away layers and label any visible feature. There is a broad selection of anatomical, clinical and radiological text accompanies the 3-D presentation. The interactive spine in this reviewer's opinion is an essential tool for use in teaching, in the clinic and in presentations. This software has unmatched power to convey anatomical features in a comprehensible format and can be used as a powerful resource to educate the jury and adjudicator.

Overall this Interactive Software is one worth adding to an Independent Medical Examiner's set of tools.



Letter to the Editor

March 15, 2002

Dear Dr. Ranavaya;

I would like to address some of the issues that Drs. Ladin, Dilla and Friedman raised in Sept/Dec, 2001 issue of Disability Medicine. My perspective is a little different – I am a neurologist in full-time private practice who performs IME's but also, an attorney admitted to the bar in three states. I share these correspondents' concerns and have some explanations and suggestions. There is a role for the ABIME, but some of the problems are manifestations of our adversarial system and will not be resolved by a position paper.

In most cases, the opposing attorney does not have your level of knowledge about the medical issues. If the attorney cannot battle you on the medicine he or she must diminish the impact of your evidence. One of the main goals of cross-examination is to reduce the credibility of the expert witness – and make no mistake, even though you are hired as an independent medical examiner, when you testify your client's attorney will expect you to function as an expert witness.

Unfortunately, this process is distasteful. The attorney will examine your

curriculum vitae in minute detail to identify unexplained gaps in your history, false or exaggerated credentials and anything else that calls into question your reliability and honesty. Bias is a major part of credibility and financial issues are certainly fair game. At a minimum you must expect questions about your IME and other expert fees in the case at hand. You will probably be asked how often you have worked for your client, how often you have testified for this client, and what portion of your professional life is devoted to similar medical-legal activities. The ABIME will not be able to change this.

"Financial records are private" – not necessarily. Be advised, by entering this arena you relinquish some of this privacy. The extent of discovery and cross-examination regarding your income and professional activities will vary from jurisdiction to jurisdiction. Some courts do order experts to produce tax returns or other financial data. Certainly, you can seek a protective order but don't expect a complete shield from disclosure.

I am also concerned about observers and recordings. Videotaping can be intrusive, audiotaping less so. If the

examinee wishes to audiotape the evaluation you should make your own audiotape and arrange for professional transcription. Should you become aware that the examinee is secretly taping (possibly a criminal act) you should stop the evaluation and contact your client for advice.

The National Academy of Neuropsychology has position papers on third party observers and test security (www.nanonline.org/paio/policy.shtm) that deal with these issues. However, neuropsychologists have a particular concern that most of us do not. They use copyrighted tests and need to keep these secure. Dissemination could violate the copyright and also destroy the validity of the standardized instrument. I agree that the ABIME should look at this. Many of us do utilize examination techniques to identify inconsistencies and nonanatomic findings (supine versus sitting straight leg raising, axial compression, truncal rotation, et al.) and it is in our interest to preserve these tools.

Regrettably, even this may be beyond the Board's influence. Videotaping is already permitted in some states. For



example, the Florida Supreme Court recently held that the IME process is inherently adversarial and that an examinee is at risk of losing valuable rights based on responses made to the more sophisticated physician examiner. Therefore, that court ruled that the examinee could bring an attorney and videotape the examination. In other states, the workers' compensation/industrial accident commission rules and regulations also allow this.

If videotaping is permitted take steps to minimize potential misuse. They'll probably object, but you should insist on a written agreement with the examinee and his/her counsel covering the following:

1. Videotaping by an independent professional only
2. A complete and unedited copy of all raw footage to be sent to you within 24 or 48 hours
3. Scope of use – that the tape be used only in the matter at hand
4. Dissemination – that the contents not be transmitted, broadcast, etc., by any means for any other purpose
5. Some provision for damages if these restrictions are violated

I believe that any attorney who advises clients not to cooperate with the IME

exceeds his/her duty to provide vigorous representation and is probably engaging in unprofessional conduct. Proving this is another matter. Perhaps, this is partially a problem of our own creation. By calling these independent medical examinations – and not evaluations – we give the attorney room to insist that only a physical examination be performed. I provide examinees a written description of the process that emphasizes the importance of their history and impressions but I doubt it would sway someone who has been coached not to complete forms or answer questions.

Ultimately, you must decide whether to proceed or not. Document the refusal, but don't go overboard by repeating yourself or dwelling on this or you will appear irritated with the examinee. It is vital that you maintain a professional demeanor during the evaluation and later, in your writing. Remember, if the examinee places his physical or mental condition into consideration he or she is obligated to cooperate with appropriate evaluation. The court could throw out any complaints in areas where you could not render an opinion because the examinee declines to respond. Be prepared to explain why the IME is more than a physical examination, and why a detailed history and pain/disability assessment tools are so important.

I join with Drs. Ladin, Dilla and Friedman in calling for the ABIME, perhaps in conjunction with other professional organizations whose members are affected, to develop a position paper on the issues under consideration. We are not going to overturn fundamental procedures of the judicial system but we should be able to provide some much-needed guidance.

Sincerely,

Jeffrey Wishik, M.D., J.D., C.I.M.E.
Board Certified Neurologist/Clinical
Neurophysiologist, A.B.P.N.
Providence, Rhode Island



Letter to the Editor

SUBJECT: The IME Wars: A Proposal For Developing a Peacemaking Process in the Workers' Compensation Field

Dear Dr. Ranavaya;

For many years, the use and misuse of independent medical examinations ("IME's") in the workers' compensation field in Hawaii(has been the source of consternation, anger, expense, frustration and sometimes injustice to all players involved. A culture of distrust has developed because of the generally wide gulf in communication or miscommunication between statewide players, i.e., patients, attorneys, medical providers, insurance adjusters and adjudicators.

The lack of collaborative communication and trust reflects the political environment; that is, the need of elected and non-elected public officials to balance the competing self-interests of the players in workers' compensation law and practice. A delicate, but debilitating, political balancing act is maintained between claimants (including their legal representatives), employers, unions, insurance companies

and medical providers. At the same time, and on an annual basis, legislators and bureaucrats have to traverse a minefield of lobbyists and shifting political interests.

The resulting public policy, administrative rules and legislation have all laid the foundation for the IME wars in Hawaii*. In these "wars" the players all too often view IMEs, and the practitioners who perform them, as a "necessary evil." The perception is that IMEs are primarily designed to support selfish interests such as claim compensation or denial, continued access to or termination of medical or chiropractic treatment. IMEs are not perceived as a search for the truth of whether a claimant has sustained an industrial injury and, if so, what course of treatment is needed to return the claimant to productive employment at an acceptable cost.

It is time to call a truce to this "necessary evil." The IME wars represent an almost total breakdown in communication, and hence trust, between major players in this crucial area of public policy. What follows is a

summary outline proposal for creating a peacemaking process model in Hawaii* that would address, in a fair, reasonable, efficient and success-oriented fashion, the issues and solutions necessary to eliminate the misuse of the current IME system.

Peacemaking Process: Some Critical Thoughts

It is respectfully suggested that the AIMEHI and ABIME jointly convene a peacemaking process conference in Hawaii*. Invitees to the conference would include the major players identified above, along with representatives from lobbying groups, legislators, bureaucrats, public policy analysts and academicians.

The purpose of this conference is to first create a process for peaceful and productive dialogue regarding needed transformation in the IME model as used in Hawaii*, and to not deal with substantive issues. The rationale for a bifurcated approach, i.e., process vs. substance issues, can be summed up as follows:

*Hawaii is used as a model in this Memorandum; however, the author believes the Hawaiian model is generally applicable to other state jurisdictions.



Research and practice in the conflict resolution field strongly supports the notion that the design and practical application of a successful dispute resolution system in any human field has many facets, but none more crucial than player “buy-in” to the dispute systems design process. If the players do not “buy-in,” then dispute resolution agreements will ultimately fail or be relegated into inconsequentiality. This is due to, among other things, fear of or resistance to change, a perception that change is being imposed or that existing rights are being weakened, fear of minimization of power and position, and set notions of historic suppositions and values.

On the contrary, involving all players and stakeholders in dispute resolution design encourages a democratic and participatory process. The process is then perceived, and rightly so, as one that allows for a dialogue of equals and group analysis. This is then a dialogue, which promotes the players’ greater understanding of why there is conflict and its causes; the unfolding of interest-based skills and mutual problem-solving techniques; and the possibility for changing the existing “necessary evil” IME culture.

In sum, initial inclusivity of all interested parties in a peacemaking process design not only gives everyone

involved a much needed voice, but also makes them a stakeholder in successfully implementing mutually agreed upon transformation in the IME/workers’ compensation field.

It is recommended that professional peacemakers be used throughout the pre-conference design and later stages of the peacemaking process.

Professional peacemakers would assist participants in determining the nuts and bolts of the process.

The following issues, which are not presented in order of importance that would need to be addressed by participants, are:

1. Additional players
2. Initial issues in IME field
3. Conference design, i.e., roundtable, facilitation, colloquium
4. Choice of peacemakers and roles, i.e., mediators, facilitators and/or neutral fact-finder/researchers
5. Resource people
6. Conference agenda and goals
7. Conference location, time and environment
8. Process protocols
9. Media participation and coverage

10. Other participant issues and ideas considered

It is further suggested that the AIMEHI and ABME provide funds from existing resources or seek funding from appropriate public and/or non-profit organizational sources to sponsor the initial conference design process meeting. The group collective mind would discuss future funding of the peacemaking process at a first meeting, unless a sponsor could be found to underwrite the entire pre-conference and conference costs. If the Hawaii model proves successful, future funding could be forthcoming from funding sources.

CONCLUSION

John Lennon left us with the epitaph: “Give peace a chance.” Peace will have the greatest chance if the process for achieving it is well-thought out and planned by people of good will. It is now time to make peace a priority.

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