

CO-EXISTING PSYCHOLOGICAL FACTORS

The patient's personality and emotional state may adversely affect the use of medication such as opioids and treatment outcomes.

by Moti Peleg, DSW, and Charles Carluccio, MD

During the recent decade, a growing number of physicians in the field of pain management have shown increasing interest in integrating alternative approaches such as a psychological modality in the assessment and treatment of their chronic pain patients. This trend developed out of a growing frustration over poor treatment outcomes from increasing numbers of patients. More and more physicians have begun to realize that in spite of state of the art bio-medical interventions, prolonged pain, excessive use of analgesics, and lingering depression and anxiety halt the patient's progress, suggesting a psychological factor that elicits, maintains, and exacerbates their ailments.

Many pain treating physicians find it hard to view chronic pain as having multifactorial characteristics. There appear to be numerous reasons for this reluctance and further studies may shed light on understanding this behavior. It is possible that negative stereotypes still exist in the medical community about psychological services. Lack of knowledge and awareness of the functions of the pain-treating psychologist — who views the chronic pain patient as a whole rather than as a part — may be a possibility. Other reasons may relate to a physician's professional image in seeking to "cure" or "improve" the patient's disease condition via a strictly bio-medical model rather than "giving in" to alternative medicine approaches. Other possibilities may include growing involvement of the insurance bureaucracy in a patient's care which may limit the physician's treatment options and potentially discourage referrals to psychologists.

The purpose of this paper is to bring attention to psycho-

logical factors in the chronic patient's psychological profile and, in particular, mood disorders and substance abuse that can interfere with the medical approach and affect treatment outcomes.

Chronic Pain and Mood Disorders

When pain prevents people from doing the things that give them fulfillment and purpose in life, depression is inevitable and yet is often overlooked or inadequately treated in pain management. When chronic pain and depression co-exist, physical and psychological illnesses become enmeshed and blur the boundaries between the two.¹ Studies support a mutually reinforcing relationship between depression and pain. The prevalence of major depression is higher for medically ill patients, particularly those in chronic pain. While the prevalence of major depression in the general population is approximately 4%, it is approximately 30% among chronic pain patients.² Further, the lifetime prevalence of depression in studies of chronic back pain, pelvic pain and chest has been found to be 65%.³

A recent review of chronic pain patients' psychological profiles at the Pain and Stress Management Center (PSMC) in Ridgewood, New Jersey revealed that at least 75% of these patients suffered from depression and anxiety disorder related to their chronic medical conditions. Depressed chronic pain patients reported greater pain intensity, less life control, and more use of passivity/avoidance as coping strategies. They also described greater interference from pain and manifested more pain-centric behavior than chronic patients without depression.⁴

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Co-existing Psychological Factors

Anxiety disorder was found to have a significantly higher rate in patients with chronic pain than in individuals found in the general population.⁵ Anxiety patients complained of major symptoms that characterized depression and anxiety, among them being: frequent fatigue, sadness, disturbance in sleep and appetite, helplessness, hopelessness, disinterest in pleasurable activities, restlessness, agitation, decline in concentration and memory, worthlessness, and guilt. Table 1 presents a patient questionnaire intended to provide an initial assessment of mood disorders of chronic pain patients.

Patient Denial

Physicians are not alone in overlooking the emotional component in chronic pain. Often patients will not acknowledge their own depressed moods due to denial or response bias caused by the fear of being perceived weak, being labeled with a psychogenic diagnosis, or consequences such as the loss of insurance coverage or

benefits. Although the association of chronic pain and depressive disorder has been established in the literature, its mechanisms are not yet clearly defined. The complexity of the interplay between depression and chronic pain creates a challenge for the conscientious physician. For example, patients in pain often suffer insomnia and fatigue which are common vegetative symptoms of depression. Patients usually attribute these symptoms to pain rather than depression. Although it can be difficult to distinguish cause and affect in the pain/depression cycle, once it is recognized and defined it will require active interactions by the educated physician to prevent errors that would affect a positive treatment outcome.

Table 2 illustrates certain noticeable behavior patterns of pain patients having co-existing psychological factors.

Depression Disorder

Supernaw⁶ defined the interrelationship between chronic pain and depression as

Noticeable behavioral patterns of pain patients with co-existing psychological factors

1. Prolonged pain in spite of appropriate medical treatment.
2. Excessive use of analgesics.
3. Mood disorders associated with the injury/illness prior or post surgery, i.e., the patient is overly anxious or shows labile behavior (depression)
4. Lingering, indecisiveness, self doubt and inadequacy.
5. Non-compliance or inconsistency with the physician's therapeutic regimens including medical, home instructions and follow-up appointments.
6. Occasional loss of prescriptions
7. Excessive visits as well as overuse of the health care system that includes frequent visits at various medical groups and/or hospitals and treatment by increasing number of physicians.
8. Repeated injuries and/or reoccurring pain condition. Repeated surgeries.
9. Lack of family and/or social support.
10. History of medical problems, mental problems and addiction in the patient's family system.
11. History of disturbance of interpersonal relationships.
12. Symptoms of Borderline and or Sociopathic behavioral patterns, when the patient becomes emotionally invested in his/her illness for monetary or psychological gains, i.e., attention seeking, control, manipulation, involved with litigations and/or disability or workmen's compensation programs.
13. Ongoing discontentment with treatment & display of inappropriate anger.
14. Runs out of medication prematurely.
15. Overly friendly or very withdrawn.

TABLE 2. Noticeable behavioral patterns of pain patients with co-existing psychological factors.

"the chronic pain/depression complex" and pointed out that depressed chronic pain patients exhibited greater pain intensity, pain behavior, and significantly decreased function ability. If the components of pain and depression are not both simultaneously treated, there is a risk that successful treatment outcomes are drastically diminished. For example, if the pain is secondary to the depression component of the complex, then the chance of successful analgesic intervention is diminished. On the other hand, if the depression is secondary to the chronic pain and only the pain is treated, the unresolved depression will continue to trigger the occurrence of pain.⁸

There is growing evidence that chronic pain patients who return more depressed and demoralized from referrals to physical therapy, epidurals and/or other biomedical pain interventions, are those whose initial assessment minimized the effect of mood disorders on their pain. Depression and anxiety in patients with

chronic pain can alter levels of neuro-hormonal substances which contribute to the encoding of state dependent physiologic and effective responses. Initial or reactional negative emotional status can have a direct impact on physiologic processes that affect the progression of chronic pain.⁷

A recent study, using chronic pain as a predictor of depressive morbidity in the general population, shows a clear association between depressive mood disorder to chronic pain. Subjects in the study, with at least one to three key depressive symptoms, had at least one chronic painful physical condition. Subjects suffering from chronic gastrointestinal pain, headaches, and/or backaches exhibited overall feelings of depression.⁹

Chronic pain may be provoked by either physical trauma or a psychogenic episode. In other words, chronic pain may be secondary to a malignant or non-malignant organic course or a symptom of depression. Depression may result from

biochemical imbalance, i.e. endogenous depression or a result of situational dynamics such as reaction to organic disease or in response to life's upheavals such as personal loss. Chronic pain sequelae can trigger depression and, vice versa, depression can trigger pain.⁷

Panic/Anxiety Disorder

Panic disorder and generalized anxiety disorder are the most common disorders in chronic pain patients and can complicate any chronic pain problem. These disorders can be manifested via a dramatic increase in muscle tension, intense affect, and complaints by the patient at the physician's office. Masked anxiety may be communicated to and incorrectly diagnosed by the physician as a severe pain condition. Panic disorders may be manifested in migraine headaches as well, suggesting that some unnecessary invasive procedures may be prevented if proper attention is given to an assessment and identification of mood factors. Mood dis-

PRELIMINARY OPIATES AND SUBSTANCE ABUSE QUESTIONNAIRE

Dear Patient:

The following questions are personal but confidential and are aimed to help you receive a better level of care. It requires you to be as truthful as you can be. Please circle your answer.

1. Are you using over the counter medication, i.e., aspirin, Advil, etc.? Yes / No
2. Have you sometimes overlooked telling your pain doctor that you tend to use over the counter medication? Yes / No
3. Have you ever considered using another person's prescription medication to ease up your pain, i.e., Oxycontin, Percocet? Yes / No
4. Do you understand how your prescribed medication works and the risk factors? Yes / No
5. Are there any other physicians that treat you presently and that prescribe medication for your pain condition? Yes / No
6. Is it possible that when reviewing with your physician your medication, that you unintentionally overlooked mentioning other prescribed medication that you take? Yes / No
7. Is it possible that you might find it uncomfortable to tell your doctor of illicit drugs or alcohol that you used in the past or might be using at the present time? Yes / No
8. Has alcohol use ever caused a problem for you, i.e., DWI, Injury, embarrassment, etc.? Yes / No
9. Do you find it helpful to take extra medication to feel better? Yes / No
10. Can you skip a dose of pain medication without suffering significantly? Yes / No
11. Do you find that your pain condition increases when you are more depressed, stressed or anxious? Yes / No
12. Have your friends or family members been concerned about your overuse of medications? Yes / No
13. Have you in the past been discontent with your pain medication? Yes / No
14. Have you ever felt like complaining against your physician or the medical facility where you were treated? Yes / No
15. Do you feel that the solution to your pain problem depends only on medication or medical procedures? Yes / No

TABLE 3. Preliminary opiates and substance abuse questionnaire.

Co-existing Psychological Factors

ORTHOVISC® High Molecular Weight Hyaluronan

BRIEF SUMMARY. Please see full prescribing information.

INDICATIONS

ORTHOVISC® is indicated in the treatment of pain in osteoarthritis (OA) of the knee in patients who have failed to respond adequately to conservative nonpharmacologic therapy and to simple analgesics, e.g. acetaminophen.

CONTRAINDICATIONS

- Do not administer to patients with known hypersensitivity (allergy) to hyaluronate preparations.
- Do not administer to patients with known allergies to avian or avian-derived products (including eggs, feathers, or poultry).
- Do not inject ORTHOVISC® in the knees of patients with infections or skin diseases in the area of the injection site or joint.

WARNINGS

- Do not concomitantly use disinfectants containing quaternary ammonium salts for skin preparation as hyaluronic acid can precipitate in their presence.
- Transient increases in inflammation in the injected knee following ORTHOVISC® injection have been reported in some patients with inflammatory osteoarthritis.

PRECAUTIONS

General

- Strict aseptic injection technique should be used during the application of ORTHOVISC®.
- The safety and effectiveness of the use of ORTHOVISC® in joints other than the knee have not been demonstrated.
- The effectiveness of a single treatment cycle of less than 3 injections has not been established. Pain relief may not be seen until after the third injection.
- The safety and effectiveness has not been established for more than one course of treatment.
- **STERILE CONTENTS.** The pre-filled syringe is intended for single use only. The contents of the syringe should be used immediately after opening. Discard any unused ORTHOVISC®. Do not resterilize.
- Do not use ORTHOVISC® if the package has been opened or damaged.
- Store ORTHOVISC® in its original package at room temperature (below 77°F/25°C). DO NOT FREEZE.
- Remove joint effusion, if present, before injecting ORTHOVISC®.
- Only medical professionals trained in accepted injection techniques for delivering agents into the knee joint should inject ORTHOVISC® for the indicated use.

ADVERSE EVENTS

ORTHOVISC® was investigated in 3 randomized, controlled clinical studies conducted in the U.S. An integrated safety analysis was conducted, pooling the ORTHOVISC® groups from the 3 studies and pooling the control groups, which were either intraarticular saline injections or arthrocentesis. In the integrated analysis, there were 562 patients in the groups treated with ORTHOVISC® (434 receiving 3 injections and 128 receiving 4 injections), 296 in the group treated with physiological saline, and 123 in the group treated with arthrocentesis.

Adverse events occurring at >5% of the overall integrated population included: arthralgia (12.6% in the ORTHOVISC® group, 17.2% in the saline group, and 0.8% in the arthrocentesis group); back pain (6.9% in the ORTHOVISC® group, 12.2% in the saline group, and 4.9% in the arthrocentesis group); and headache NOS (12.1% in the ORTHOVISC® group, 16.8% in the saline group, and 17.9% in the arthrocentesis group). Injection site adverse events (including erythema, edema, pain and reaction NOS) occurred at rates of 0.4%, 0.9%, 2.5% and 0.2%, respectively, in the ORTHOVISC® group, compared to 0.0%, 0.3%, 2.0%, and 0.7% in the saline group and 0.0%, 0.0%, 0.8% and 0.8% in the arthrocentesis group.

Local adverse events reported on a by-patient basis for the combined ITT populations of the three studies are presented in Table 1.

Table 1
Local individual adverse events reported on a by-patient basis for the combined ITT populations of the three studies.

Adverse Event	ORTHOVISC N = 562	Saline N = 296	Arthrocentesis N = 123
Any Adverse Event	349 (62.1%)	204 (68.9%)	85 (52.8%)
Injection site erythema	2 (0.4%)	0 (0%)	0 (0%)
Injection site edema	5 (0.9%)	1 (0.3%)	0 (0%)
Injection site pain	14 (2.5%)	8 (2.0%)	1 (0.8%)
Injection site reaction NOS ¹	1 (0.2%)	2 (0.7%)	1 (0.8%)
Pain NOS ¹	14 (2.5%)	11 (3.7%)	1 (0.8%)
Arthralgia	71 (12.6%)	51 (17.2%)	1 (0.8%)
Arthritis NOS ¹	4 (0.7%)	5 (1.7%)	0 (0%)
Arthropathy NOS ¹	5 (0.9%)	3 (1.0%)	0 (0%)
Baker's cyst	2 (0.4%)	2 (0.7%)	0 (0%)
Bursitis	6 (1.1%)	6 (2.0%)	2 (1.6%)
Joint disorder NOS ¹	2 (0.4%)	0 (0%)	0 (0%)
Joint effusion	2 (0.4%)	1 (0.3%)	1 (0.8%)
Joint stiffness	3 (0.5%)	2 (0.7%)	0 (0%)
Joint swelling	4 (0.7%)	2 (0.7%)	1 (0.8%)
Localized osteoarthritis	5 (0.9%)	1 (0.3%)	1 (0.8%)
Aggravated osteoarthritis	2 (0.4%)	0 (0%)	1 (0.8%)
Knee arthroplasty	3 (0.5%)	2 (0.7%)	0 (0%)

Notes: ¹NOS = Not otherwise specified.

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orders are complex phenomena, particularly when it comes to identifying their roles in affecting chronic pain disorder symptoms. Evaluation of the patient by a psychiatrist for the purpose of prescribing the antidepressant Anxolytics, for example, might be an essential element in the comprehensive treatment of pain, but requires monitoring of these medications — especially for pain medication interactions.⁶

Identifying Substance Abuse

Substance abuse is a potentially co-existing factor in chronic pain that impedes recovery efforts by the physicians and can manifest itself in escalating doses, sociopathic behavioral patterns, maneuvering the health care system in order to obtain doses of drugs, and withdrawal symptoms.¹⁰ The co-morbidity of depression, anxiety, traumatic stress, and personality disorder among drug-abusing chronic pain patients is extremely high.

Studies indicate that approximately 90% of chronic pain patients treated in clinics specializing in pain management take medications. Opioids and analgesics are prescribed to approximately 70% of these patients while antidepressants and benzodiazepines given to 25%. Of these chronic pain patients, up to 12% potentially meet the criteria for substance abuse.

These studies concluded that individuals with a previous history of substance abuse were found to be at high risk for a relapse during treatment for chronic pain. These individuals experienced a cycle of pain followed by relief after taking medication, a factor which acted as an operant reinforcement of future use. As a result, the use of opioids as a treatment for non-malignant chronic pain patients still remains a subject of considerable debate.¹¹

Interrelated co-morbid factors like genetic depression, family background, a history of mood disorders, as well as traumatic stress, contribute independently to substance abuse and affect the use of opioids in treating these patients. Overall however, evidence generally suggests that opioids therapy — in patients with chronic pain, but without a history of abuse or addiction — can be undertaken with a very low risk of adverse outcome.¹²

Patients must be given detailed instructions by their pain treating physician about the parameters of responsible drug taking with the goal being to prevent the use of illicit drugs and to eliminate, or prevent, abuse of the patient's drug regimen. At the same time, the actively abusing patient must be seen frequently.¹³

All chronic pain patients can benefit from ongoing communication between the pain treating physician and the pain treating psychologist in order to coordinate a treatment plan that is reviewed periodically and addresses the co-existing factors. It is vital, especially when considering opioid therapy, to determine whether the chronic pain patient has an underlying disorder that can be treated definitively.¹⁴ According to the American Society of Interventional Pain Physicians (ASIPP) controlled substance guidelines, it is a difficult task for the pain physician to identify the profiles of abusers or addicts.¹⁵ Still it is recommended that every pain practice develop a check list of "addictive characteristics" to serve as a pre-screening method in identifying chronic pain drug abusers.¹³ Table 3 presents a sample substance abuse questionnaire that may be used as an initial/preliminary screening device to assess a patient's drug usage.

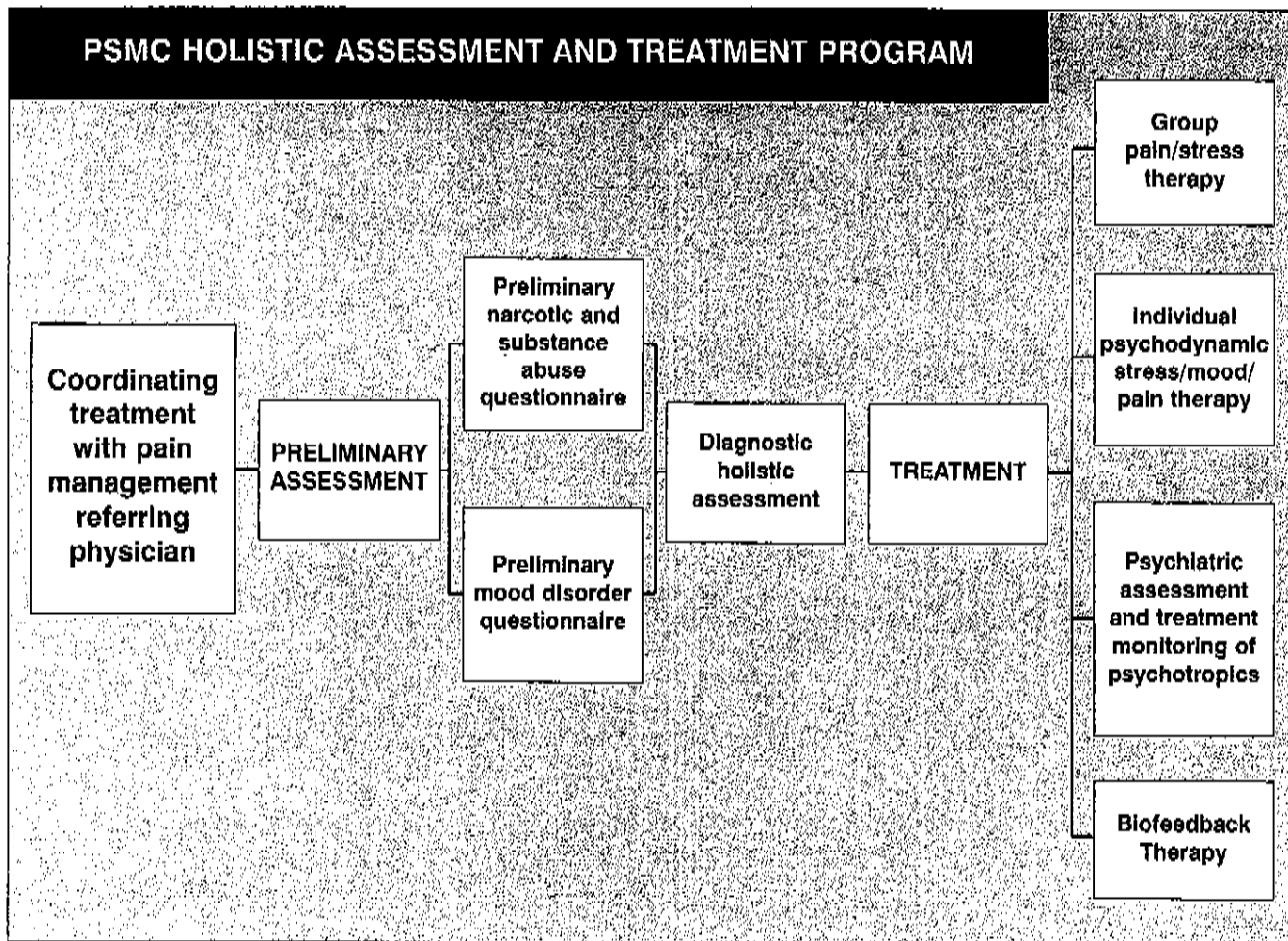


FIGURE 1. Flow diagram illustrating the PSMC holistic assessment and treatment program.

Pain Sufferer vs. 'Drug Seeker'

It is crucial to note that not every chronic pain patient who shows an extensive history of treatment by several physicians in several medical facilities and who complains of lingering pain is a drug seeker. Some physicians, in their eagerness to identify a drug abuser, may not be aware of the true characteristics and profile of the patient and may compound the suffering of a patient by the premature labeling and/or misdiagnosing the patient as a "drug seeker."

The case of Kim, a 28 year old, white, single, paramedic illustrates this problem. She was diagnosed in a major area hospital with chronic back and abdomen pain stemming from malfunctioning kidney stone production and endometriosis. The patient presented lingering, intense pain along with depression, anxiety, and panic. She was treated by an OB/GYN, urologist, neurologist, endocrinologist, and anesthesiologist — all without significant improvement in her pain condition.

When she was referred to another hospital for a re-assessment due to her unresolved condition, the physician loudly berated her in front of the ER staff as a "drug seeker" and recommended that she not be accepted to the pain management department of the hospital with an alert that this patient was presenting only for the purpose of seeking drugs.

When this patient returned to her OB/GYN, she underwent a biopsy of the uterus tissue and subsequent surgery. During surgery, it was found that the patient was suffering from an adhesion that was fusing her bowel, ovaries, and uterus. The surgeon supported the patient's need for opiates and determined that the patient's need for pain medication was appropriate and justified and that the patient was not a "drug seeker." This was further concurred when that physician referred her to the PSMC in Ridgewood where a holistic psychological pain assessment was administered and found her to be depressed, post trauma-

matized, and anxious. Further, the Milon Behavioral Medicine Diagnostic test did not indicate an addictive personality or a personality disorder. A proper treatment plan — addressing the entire person — was recommended to include biofeedback, psychiatric monitoring of psychotropics, individual psychotherapy, and group therapy for pain and trauma.

The patient was referred to St. Joseph's Medical Center in Paterson, New Jersey for medical assessment and further treatment where a team of anesthesiologists worked closely with PSMC in a holistic approach in treating the patient's pain. The physicians prescribed appropriate opioids for pain and monitored her medically while, together with the PSMC psychologist, they addressed the coexisting factors of depression and anxiety which had exacerbated her condition in the past. She continued to show impressive progress in both her medical and psychological state.

Various co-existing factors in chronic pain including depression, anxiety, substance abuse and other co-morbid factors affect chronic pain and, too often, are overlooked to the detriment of successful opioid use and treatment outcomes.

Multi-Disciplinary Team Approach

The most effective pain management strategies utilize a multidisciplinary team approach that considers the diagnostic complexity of chronic pain patients. Terms such as addiction, misuse, abuse, and dependence have been utilized inconsistently to describe various behaviors, making interpretations of various research studies difficult. At the same time, aberrant drug use continues to present threats to the integrity of pain treatment. By integrating a holistic diagnostic assessment, co-morbidity mood factors and substance abuse factors can be addressed simultaneously with the treatment of the pain itself.

Figure 1 presents a flow diagram illustrating the PSMC holistic assessment and treatment program.

The holistic approach in the assessment of a chronic pain patient must be followed up by a comprehensive structured treatment that will include, in addition to medical procedures, the interventions of a pain treating psychologist who can address not only mood and personality factors but substance abuse factors as well. Chronic pain patients may have an unusual clinical predicament in that they often present a history of multiple treatments and medication that might have significant side effects during the first intake appointment; therefore, a drug interaction such as over-sedation can occur when an anti-depressant is added to a regimen of multiple treatment agents.¹⁶

Conclusion

The chronic pain patient presents a difficult diagnosis and management challenge. Various co-existing factors in chronic pain including depression, anxiety, substance abuse and other co-morbid factors, affect chronic pain and, too often, are overlooked to the detriment of suc-

cessful opioid use and treatment outcome. Even though there is a growing awareness of co-existing factors of depression and possible substance abuse among pain patients, insufficient time is spent considering the signs and symptoms of these co-existing factors in order to make a more definitive diagnosis.

Effective pain management — where the prescribing physician takes under consideration the interplay between mood disorder and pain — can improve the chances for a better outcome. Further, the complexity of pain pharmacology — integrating analgesics with psychogenic regimens all the while dealing with mood disorders, potential substance abuse, personality dynamics and other co-morbid factors — demands high skill levels in several specialties that can be most effectively provided by a holistically-trained multidisciplinary team. ■

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