



## Evaluating the complex chronic pain patient

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Regression of initial benefit characterizes most of the treatments that we offer chronic pain patients [1–5]. Although a percentage of patients seem to do quite well after any form of therapy, the rate of regression of benefit in a parallel way also impeaches our patient selection criteria [6,7]. Virtually every article extolling some treatment or other for chronic pain seems to suggest its efficacy in the “properly selected patient” [8–10]. Yet, too often, we are not told who that patient might be. Suggestions abound that further research is necessary, yet it never seems to get done. All this makes the selection of the patient for the neurosurgical management of chronic pain difficult and challenging.

A recent prospective review of opioid pumps for chronic pain found that 25% of the patients appropriately screened by the surgeon and the psychologic team failed to benefit from the epidural trial [11]. This study and others like it challenge the validity of our standard screening criteria. Perhaps because of the failure of screening to select patients who are likely to do well, many practitioners bypass psychologic screening and use the percutaneous trial as the determinant for permanent implantation. In fact, psychologic testing has not been found to predict long-term outcomes in neuroaugmentative surgery even if it might be effective in predicting the effects of the percutaneous trial [12].

Added to this are the psychosocial issues that are often blamed for the lack of significant benefit

[13], even when procedures might have seemed effective at the outset [14,15]. Although psychologic screening by itself is not as effective a screen as we would like, little is usually done to assess the patient’s social motivating factors. Return to work is commonly not looked on as the most important of factors by surgical researchers [16,17]. Improved activity levels as reported by the patient, control of physician contact, reduction in oral opioid use, and the like are accepted as the hallmarks of efficacy [18,19]. Yet, third-party payers view return to work and claim closure in compensation cases as far more meaningful outcomes [20]. In our experience, it is common for the patient to claim excellent outcome to the surgical faculty while requesting a higher level of disability compensation from their other physicians. Support for our procedures by compensation programs is often withheld, because the actual costs end up being far greater in reality than our own published outcome studies suggest [4].

A most perplexing part of the puzzle is the patient with initial benefit who then regresses. Some of our peers “solve” this problem by offering additional procedures, never fully factoring in the effects of repeated benefit/failure cycles. Indeed, some hide behind the unscientific rubric that because some patients seem to improve with each procedure, all that is needed is to intervene again and again so that eventually “most will benefit.” Not only is this unscientific, but things just do not work out that way. The same psychosocial factors that had affected the outcome of a prior procedure can be expected to do the same again unless they can be minimized. It is a rare neurosurgeon who has the time or the faculty to provide in-depth studies of chronic pain patients. Psychologic reports are often

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filed without being read, employment and legal issues are often ignored, and patients' expectations are exaggerated by outcome films, web sites, and brochures that portray only the best possible outcomes [21]. Patients, on the other hand, often do not hear the possible negative effects of our treatment. Just ask your patients to repeat what you told them at their last visit to verify this point.

On the other side of the coin is the surgeon who feels obligated to do something with the patient referral [22,23]. Although some of us can send the patient back with the decision that neurosurgery for pain is not likely to be of benefit, there are others of us who do not deny an operation if the patient wants it. The number of neuroaugmentative operations now performed by anesthesiologists further clouds the picture [10,24]. We have seen many patients who had been turned down by a neurosurgeon but then had the procedure performed by other disciplines later.

There is relatively little time to make the surgical decision. In some practices, the procedure is offered so long as there are no psychologic contraindications for surgery. Psychologists are rarely asked for their prognosis. Thus, if the patient "passes" the psychologic testing procedure, she or he becomes an "appropriate" candidate. This approach might explain why there is so much failure with some of our procedures.

It is probably not reasonable to expect the surgeon to investigate each patient to the degree necessary to be more selective [25]. Also more selectivity means fewer operations. This by itself has important financial considerations. Not only is the possible revenue that the patient represents lost, but the referral pattern might change if referral patients are turned away.

This article tries to deal with those issues that make patient selection difficult and to offer some techniques that can help the neurosurgeon to make more rapid and more valid decisions. Not all chronic pain patients require opioids, and not all chronic pain patients require surgery. The trick is to recognize those who are likely to respond favorably to treatment and to reserve interventions for them. The purpose of our treatments is to make patients better and not to add to the depression augmented by yet another failure to benefit after unreasonable expectations [26,27].

### **Simplifying a complex medical history**

Reviewing thick medical records is not usually possible when seeing patients in a busy office. Yet,

in our experience, we commonly find that the patient's concept of the effects of the original start of the pain problem and the outcome of prior treatment often runs counter to the information in the chart. Conservative treatment is commonly interpreted as a euphemism merely for the passage of time. Patients who fail to benefit from physical therapy may just not have participated, or the physical therapist might have tried to push the patient too far. Because most chronic pain patients have elements of musculoskeletal pain as a result of conditions other than cancer, some physical restorative services are needed whether or not you decide to operate. Virtually all patients with significant physical impairments can improve their level of function with participation in physical activities [28]. The patient's cooperation is needed for this to succeed. The failure of the patient to participate before your proposed operation portends of similar problems later, regardless of the effectiveness of your procedure. Lack of participation also suggests that complex issues exist. It is thus important to read the periodic or final summaries provided by the physical therapists. Again, this information is usually easy to find by rapidly thumbing through the records.

Many of our patients have records that span years of medical care and are many inches thick. No surgeon has the time to go through all this material. Often, patients do not keep accurate records of what care they have been through. Of course, after many years with multiple physicians, their memory about this material is impaired. There are, however, some important tricks that can make review of the most complex record easier:

1. All patients should present with their old medical files. Make this a standard in your office for all referrals. Availability of the medical records should be a prerequisite for any patient contemplating an operation.
2. Medical records become easier to handle if you look for specific items. You or your assistant should review the original medical contact after the first onset of symptoms. For example, in a patient with failed back surgery syndrome, you will likely find a medical record, emergency room visit, or workers' compensation form that corresponds to the original injury. Review how the patient presented at that time. In our experience, complex patients commonly distort their original symptoms. The patient might tell you that there was leg pain at the outset,

whereas the records document that leg symptoms did not occur until after the second back operation. Distortions of this sort are not usually deliberate. They do suggest that some future distortion might occur after your proposed operation, however. If you identify such earlier distortions, it is important that you or your assistant query the patient at a subsequent visit about what you told her or him about the procedure that you are considering and its expected outcome. We have found that, in general, distorted concepts before an operation encourage dissatisfaction with outcomes later.

3. Try to determine why the original injury resulted in continued suffering. If the injury did not justify the degree of impairment at the outset, it suggests that factors other than the physical problem were at work. As we suggested earlier, unless these are eliminated, your outcome may parallel the effects of previous practitioners.
4. Read each prior operative report. These are easy for your assistant to find and to mark for you. The patient's interpretation of the need for the operation and what was done can be quite different than the documentation in the records. For example, the patient might not have had any symptoms of a cervical root syndrome at the outset, a fact that the patient has forgotten. Also look for a correlation between the patient's symptoms and the findings at the operation. In many complex pain patients, the spinal or root levels are often dissimilar.
5. Observe the initial outcome in the immediate postoperative period. In our experience, the patient often indicates that none of the operations had been helpful even for a short time, whereas the record indicates remarkable improvement at least for some period.
6. Read the reports of all imaging studies. This is especially important if the studies themselves are not available for your review. These studies can tell you a lot about previous operations and possibly offer an explanation for the patient's current problem.
7. Have your assistant mark any independent medical examination or review in the records. These are usually easy to find because they consist of a lot of typewritten pages all together. Although you might not agree with the conclusions of the examiners, these reports usually summarize the care to that

point quite well. This can eliminate the need for you to read the preceding material.

8. Check for vocational information. Commonly, we find job descriptions in the medical files. Did the patient participate actively with the counselor? If not, why? It could be that the patient's real agenda was not return to work. Fixing the patient's pain will not fix this problem [29,30]. Patients still in their working years usually need to justify not working. Pain is the most common reason given. In situations like this, the patient might conceptualize that you must provide total relief of pain or she or he will not be able to return to work. The patient might justify this after your treatment by complaining of pain to her or his primary physician while telling you how wonderful your pain operation was.
9. In workers' compensation cases, did the patient ever try to return to work after prior treatment? If so, for how long? We commonly see that chronic pain patients return to work for only a short period even when significant accommodation had been made to limit their work activities. Given the effects of the Americans With Disability Act (ADA), it is common for employers to make accommodation for the injured worker. Beware of the patient who indicates that she or he had been told that return to work would not be possible until she or he was "100 percent." Because such a level of improvement is not likely in any chronic pain patient, these statements suggest major malevolent forces other than the pain. This statement by itself might identify the pain problem as "complex" [31].
10. Does the record contain an application for social security disability? These also are fairly large forms and are easy to spot by you or your assistant by thumbing through the record rapidly. Because the definition for disability under social security is so extreme—the inability to do any job anywhere in the American economy, based on the patient's impairment, education, and experience—you must define what the patient plans to do with any improvement that you are able to provide with your treatment [32].

We have developed a simple method of marking where these elements exist in the chart. We place small (2 inches × 2 inches) Post-it tabs in specific places on the edge of the pages we mark for easy access. We place them at the top of the page to

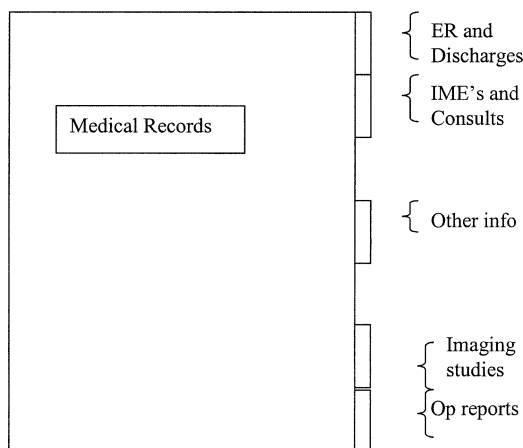


Fig. 1. This is a representation of a medical file where small paper Post-its can be used as tabs to mark the location of important chart information for your rapid access. You can also use different colored Post-its for additional identification. Your staff can quickly prepare thick medical records in this way before you see the patient.

mark emergency room visits and hospital discharge summaries, just below the top of the page to mark independent medical evaluations (IMEs) and physician consultations, the bottom of the page to mark operative reports, and just above that level to mark imaging studies. In between, we mark important other information, such as electromyograms (EMGs) and psychologic reports. Fig. 1 illustrates how we do this. In our office, we mark the date and the nature of the information at the exposed edges of the tab. Writing on the tabs makes the process more time-consuming, and you might choose not to do this. These tabs are quite inexpensive and survive quite well. They provide easy access if you need to review the records for some reason in the distant future.

### Physical findings: other red and yellow flags

Most surgeons are aware of physical findings that raise important issues regarding the likely efficacy of planned operations [33]. We find, however, as we review the records of complex chronic pain patients that, commonly, not enough attention had been applied to real warning signs. We suggest that you view the following physical findings with the consideration they imply:

1. Obesity. Obviously, the cause for obesity and its treatment are beyond the purview of this

review. Nevertheless, when efforts that have been extended to help a patient lose weight have failed in the past, some important issues are suggested. Excessive weight and poor personal self-esteem commonly accompany one another. This combination can also be an important earmark of depression. Depressed people are not as able to cope with their whole life situation as well as their pain [34]. The ability to cope with residual pain is an important determinant of your outcome. Excessive weight usually suggests lack of active participation both during and after efforts at physical restoration. In our opinion, ineffective physical therapy cannot be viewed as a failure unless there had been concomitant weight reduction. Excessive weight is likely to remain an important negative determinant regarding return to physically demanding work after your proposed procedure. We have noticed that markedly obese chronic pain patients are not as likely to pursue return-to-work activities as vigorously. If the goal of pain-relieving surgery is to get the patient back to work, weight reduction or its lack is an important signal of patient motivation.

2. Abdominal muscle strength. Ask your patient to do a simple "curl-up" while supine as you gently palpate the abdominal muscles. Especially in the patient with low back pain, this is a good index of past participation in general fitness. If the patient has had physical therapy for any spinal pain, she or he would probably have been taught how to do a "pelvic tilt" properly [35]. While the patient is still supine, place your hand palm-up beneath the lumbar spine. Then ask the patient to demonstrate how to do the pelvic tilt. The paravertebral muscles should remain completely relaxed as the patient appropriately uses the abdominal muscle to go into the tilt. This is also done without the use of the hamstrings. It is specifically an abdominal muscle exercise with concomitant relaxation of the lumbar paravertebrals. This simple procedure can give you an immediate confirmation of the patient's participation in exercise.
3. Document inconsistent physical findings carefully. Noting anything more than the minimal presence of any of these findings should alert you to motivational or psychologic issues. Examples include:
  - A. Check the differences between a supine and seated straight leg raise. Consider this

part of every pain evaluation, regardless of the location of the presenting complaint. We find significant differences even in patients with only cervical pain.

- B. Check sensory loss carefully. Patients who have loss of position and vibration in the feet with only a single nerve root problem may be signaling the presence of other issues. If the sensory loss extends to the trunk or neck from the extremity, always check its relation to the midline. In many patients with other agendas, we find non-anatomic pain loss extending across the midline. With sensory loss on one side, check for two-point discrimination by stimulating both sides with a light touch simultaneously. The impact of this simple test becomes paramount, especially when the patient has to pause to think whether or not she or he has felt you touch both sides.
- C. Consider checking two-point discrimination in the distal extremities. Even without significant sensory loss, we have found that the poorly motivated patient seems to endorse two-point loss. Its presence can at least be a clue that some motivational issues are present.
- D. Watch for abnormal shoe wear in the patient who presents with a questionable limp. Obviously, a patient with an L5 radiculopathy should demonstrate excessive wear of the toe of the shoes. The patient who demonstrates weakness on muscle testing and limps but does not show the appropriate shoe wear is suspect.
- E. Carefully compare supine distal muscle testing in the low back patient with the ability to toe and heel walk. We have observed many times a lack of concern about discrepancies in these tests by surgeons who had performed earlier procedures that had failed.
- F. Watch your patient stand after taking the history. Lack of adequate range of motion in the lower back should be consistent when the patient first stands and when testing. We always take inclinometer measures of low back and neck motion in all chronic pain patients to use as a baseline and as a means to monitor improvement objectively. It is common for patients to declare significant increases in motion after treatment without any evidence for it on measurement.

- 4. Smoking. There is reasonable enough evidence suggesting that smokers have more trouble getting over the effects of back injuries and operations [36,37]. The patient's attitude about how she or he wishes to cope with smoking addiction is an important clue for the surgeon. Obviously, some patients have considerable difficulty in stopping. Thus, there is a spectrum of success or lack of success that can accompany the patient. In our view, success in the cessation of smoking is perhaps not as important as is the patient's attitude about continued smoking. Patients who fail to prosper after pain-relieving surgery seem to be those who view with disdain any suggestion that they take responsibility for some part of their condition. Testing the patient's attitude can be achieved merely by asking the patient to keep a cigarette use diary for you. Lack of compliance or a marked drop in consumption might be a warning of negative attitudinal and motivational issues at work. In addition, by discussing the diary on a subsequent visit, you can get a good idea about the patient's responsiveness and compliance.

#### **What to do with psychologists and their reports**

Frankly, we have found that the best way to interpret a psychologist's report is to talk to the psychologist. Usually, you can get all the information you need about the patient you are treating in a short time. This information can be exchanged in a regularly scheduled meeting if you have enough pain patients, or it can be a source of discussion over lunch. Consider a brown-bag get together or meet at a convenient location. A telephone call usually provides less information. The major effect of a face-to-face meeting for the surgeon is the education that the psychologist can provide. Psychologists are usually willing to share some of their professional "tricks" when we have made time to discuss patients with them. In addition, this tends to offer a level of respect, especially for the psychologist, who may be generally intimidated by physicians.

There are some specific points that you should look for in the psychologist's report. Looking for these instead of reading the whole report can save you a lot of time. Later, you can flesh out the information if you need it. It is not acceptable to file a pain surgery candidate's psychologic assessment in the chart without your review and

understanding. At issue in pain surgery is not “psychologic clearance” but an understanding of how the patient’s psychologic problems may affect the results of your procedure. Consider that all chronic pain patients have significant psychologic or psychosocial issues. How these issues influence the results of your proposed treatment is the question.

At this point, it is important that you understand the difference between a “simple” chronic pain patient and one who is “complex.” Usually, it only takes one practitioner to treat a simple chronic pain patient; however, it requires a team approach to maximize outcome for the complex patient [31]. It is therefore important for the psychologist to include the distinction between these in the report. Clues regarding the presence of a complex pain problem can be collected from the following:

- A. Return to work likelihood/plans. The psychologist should review what the patient had previously done regarding return to work, job change, and participation with vocational counselors as well as the patient’s current attitude.
- B. Clues from medication use. Difficult drug use problems are, by definition, associated with complex patients. A postoperative plan should be suggested by the psychologist. The complexity of this plan will help you to determine how much of it should be implemented by other team members before your proposed procedure.
- C. Prior “successes” and their meaning to the patient/family. A major clue to the presence of complicating issues is the patient or family members who had not viewed positive outcomes in the past in a favorable way. Control issues, enabling behaviors, and dependency issues can change drastically with successful pain treatment. This can be quite threatening to the relationships already existing in the patient’s life. When these exist, it is common that the patient will tend to denigrate any improvement from past treatments. Stepping back for a moment offers an explanation for this response. If a variety of needs are being satisfied by the current situation even though the patient seems to be suffering, support for change might not be available. The psychologist should provide this important information, because it speaks to the prognosis of your procedure whether or not it is effective in relieving the patient’s distress.
- D. Environmental factors. The psychologist should be able to provide you with informa-

tion about inappropriate behaviors in those closest to the patient. The major ones to look for include the following:

1. The enabling significant other [38]. How will the significant other deal with the patient in less pain after your treatment? Ask the psychologist to suggest what can be done here to maximize efficacy.
  2. Responsibilities and secondary gains [39]. How will the patient integrate back into family life? What existing behaviors will improvement challenge?
  3. Pain “games.” What inappropriate games are going on between the patient and those in the environment [40]?
- E. Financial issues. How much will it cost for the patient to be well? Is return to work at a lower entry level a reasonable expectation? What sort of training will the patient need? What has the patient done about this issue already?
  - F. Depression and its meaning. Depression is expressed in different ways by chronic pain patients. How is the patient’s depression affecting the prognosis? How should it be handled? The most important question is whether the pain-relieving procedure should be delayed until there is better control of the patient’s depression.
  - G. Role models. In complex pain patients, we commonly see a family history of early cessation of work in the patient’s progenitors. People with such histories usually do not view early retirement as negative. This factor becomes quite important when a sense of entitlement also exists.
  - H. The psychologist usually rates the patient’s general average of functioning capacity at the end of the report under the heading “GAF.” Ask your consultant to divide this further. Ask how much the patient’s ability to function has been disturbed by the pain versus how much it has been impaired by other factors. Then ask how much each is likely to change given a successful outcome of your treatment.
  - I. Generally speaking, people in pain cope with it better when they have something to occupy their time. Ask the psychologist to define what the patient plans to do with the effects of your procedure.

All these issues and others can have an impact on the prognosis of your proposed treatment. Note how many exist that are basically independent of the effects of the pain relief that you

anticipate. Also note that these other issues are probably behind some of the reasons for prior failures—treatments that had held such promise at the outset. Relieving pain works to improve the patient and helps those who are closest only when pain is the major problem. In the complex chronic pain patient, pain is usually superseded by other malevolent issues as the major problem.

### **What can you learn from prior medical care?**

A major characteristic of the complex chronic pain patient is a history of repeated failures of benefit from prior medical treatment. As noted previously, we commonly find that there had been improvement noted for at least a short time after many of the prior treatments. In many cases, even when significant improvement had occurred, return to work had not been successful even during the time of improvement. Significant regression of benefit has been noted after remarkable improvement in pain level and level of function during treatment in behavioral pain management as well. This observation of regression of benefit is so important because it indicates that the improvements that resulted from what the patient did to participate behaviorally were not continued afterward by the patient. The patient had improved because of what she or he had done. The improvement was not the result of an intervention. The regression was because the patient had failed rather than because of failure of the treatment. It is highly likely that this syllogism explains many of our surgical failures. The important clue to its presence is the absence of enthusiasm by the patient for the improvement that had occurred at the time and the patient's denial of its existence later. It is thus important to interpret the complex chronic pain patient's word for prior failures in this light. Their presence suggests the likelihood that the same will happen after your procedure unless significant preoperative planning precludes it.

It is important that the patient offer some evidence of compliance in playing her or his part in the rehabilitation of pain [41]. If there is no information regarding this in the patient's history, it is simple for you to obtain it. Merely ask the patient to keep a simple activity diary for you (Fig. 2). It might be surprising to learn that the patient will not even do this or that the significant other has filled it out. These suggest the presence of major problems regarding whose pain it is and who wants it better. The easiest time to suggest an

activity diary is when you first see the patient and refer the patient to the psychologist or for further diagnostic studies. It is a simple matter to make this a routine for your office staff whenever a patient is considered for neuroaugmentative surgery. You might be able to learn about the pattern of apathy that is likely to exist from your outcomes, as in the patient's past before you proceed.

As we have suggested, patients' negative attitudes about their prior medical care suggest a repeat of that scenario with the next. It is interesting to observe patients over time who go to a new surgeon and extol that individual's efforts. So often, we see them later expressing the same negativity we had heard before. This is a well-known pain interaction described as the "confounder" [40]. In this interaction, the rules are that the patient seduces the new physician at the outset into thinking that she or he is more considerate and more likely to help. Statements characteristic of this manipulation include, "I just know you will be able to help me," or "I have learned more in the past 5 minutes from you than I have learned from any of the other doctors," or excessive compliments about your office, the way you run it, how knowledgeable you are, or how great your reputation is. Of course, none of this predicts whether or not you will be effective in helping the patient. The payoff in the game is for the patient to leave the new doctor's care without significant improvement, thinking "just another quack," because your results were ultimately no better than prior efforts, with the physician leaving the interaction with the attitude that no one can help such a difficult personality. The purpose of the seduction is to hide the lack of patient participation in any constructive aspect of care and for the patient to control the interaction. It also documents that the patient will be dependent and not at all enthusiastic about what she or he might do to help.

The rules of this game require that the physician accept the seduction at the outset; without it, there is no game. The best way to stop its progression is to suggest, when the patient seems so complimentary about your care at the outset, that other physicians had previously tried their best only to fail and that you will also fail unless the patient is willing to demonstrate objective and active involvement in rehabilitative efforts. The point is that patient involvement is the key to success in complex chronic pain therapy. If there are complicating complex pain issues, fixing the pain will likely not be effective

Patient's Name \_\_\_\_\_ Date \_\_\_\_\_

### Activity Diary

To the Patient: Please place a check mark in the appropriate box to indicate what your MAJOR activity was for each hour of the day and the night. At the end of each day please total the activities as indicated. Also list your average pain for the day and the night.

Time	Lying or leaning	Sitting	Standing
12M – 1AM			
1AM – 2AM			
2AM – 3AM			
3AM – 4AM			
4AM – 5AM			
5AM – 6AM			
6AM – 7AM			
7AM – 8AM			
8AM – 9AM			
9AM – 10AM			
10AM – 11AM			
11AM – 12N			
12N – 1PM			
1PM – 2PM			
2PM – 3PM			
3PM – 4PM			
4PM – 5PM			
5PM – 6PM			
6PM – 7PM			
7PM – 8PM			
8PM – 9PM			
9PM – 10PM			
10PM – 11PM			
11PM – 12M			
Totals for day			

Average pain level for day and night (0 – 10 scale) \_\_\_\_/10

Fig. 2. This is an example of a simple daily diary that the patient can provide. Not only does this provide evidence of patient compliance but an excellent baseline level of function before your procedure to compare with later improvement.

enough. Putting the patient on notice that active participation is a baseline requirement can abort the game. This approach provides a better chance for success than whether or not the patient thinks that you are a good doctor before she or he really knows what you are able to do.

People need to do something with pain improvement. Commonly, if there is nothing to do with it, the patient tends to concentrate on the residual problems as justification for not changing her or his functional level. If old barriers to work return are not removed, they will still exist after



your proposed treatment. How the patient dealt with work issues after the last procedure can give you clues regarding these forces.

It is important to note how the significant others in the patient's life had dealt with prior outcomes. The psychologist can tell you whether or not they had been supportive of any early improvement or had been threatened by the reduction in their role as codependent.

### **Psychosocial stuff made practical**

Failure of patients to improve or justification for the rapid regression of initial improvement commonly invokes "psychosocial" causes. The point is that all patients in chronic pain have psychosocial issues. The point is about how they affect outcome, and this is contingent on how the patients choose to deal with them. Because the issues are complex and seem to have such a variable degree of impact on the outcome, most surgeons do not deal well with them. Delegation of these issues is quite appropriate. The surgeon must help to maximize the effect of others who might be trying to help. Minimum knowledge at least about some of these issues is therefore appropriate.

#### *Return to work: social issues*

With every type of blue collar job, there is a natural job attrition rate [42]. In other words, it is uncommon for a person to remain at that job until he or she reaches the age of 65 years. Patients who have made no provision for change to other lighter duty jobs may use their residual pain as justification for not returning to a job that would naturally be unavailable to them even if they did not have a pain problem.

A major warning sign that this process might have an impact on your outcome is when the patient tells you, "Look doc, you fix my pain, and I'll do any job that you think that I can do." We have been virtually unable to get complex chronic pain patients with this attitude back to work successfully. It is probably an acceptable attitude in the patient with acute pain. Obviously, the patient must make the determination about what kind of job she or he will do. You can reasonably assess the patient's physical limitations, but that is about as far as you can go in a complex chronic pain situation. The patient must be willing to investigate what job might be available given her or his physical impairment, training, and experience. Of course, the availability of jobs is also an

important factor. An informative exercise is to have the psychologist, counselor, or someone in your office request that patients review your local Sunday newspaper employment ads to help them find some jobs that might be of interest. Interested patients will do this, call some employers for more information, and bring a marked-up paper at their next visit; paralyzed patients will not. The reason for the paralysis can then be delegated to others for causation.

In our experience, it is common to find surgeons who had performed extensive low back fusion operations support that the patient cannot return to the rigors of heavy-duty work after a successful fusion and pain relief. The point is that this had not been discussed with the patient beforehand. Many such patients had been under the assumption that permitting the extensive "repair" would have "fixed" their back. To them, this had meant return to work; to the surgeon, it had meant pain reduction and satisfactory imaging studies. Your evaluation of the complex chronic pain patient must include some suggestion regarding the practicality of work return before your procedure. Many patients become significantly more depressed after a procedure that fails to fulfill their inflated sense of what its results were likely to be.

Financial considerations are important for the patient in pain who is trying to find a way back to work. Even in well-motivated patients, it might not be reasonable to consider starting at an entry level that is far below their prior income or that does not have enough potential for growth. A decision not to return to work might be made on the basis of this factor alone.

#### *Return to work: personal issues*

Many people in pain never return to work despite reasonably successful treatment for their problem [42]. Partly, this has to do with decisions by the patient. There is nothing wrong with a patient deciding that she or he will not return to work for whatever reason. Retirement is a reasonable choice by anyone at any time. It is not reasonable for patients to continue to use their pain as the justification for not working, however. If pain is used as the justification for not working, the patient naturally has to concentrate on the residual pain rather than on what might have been improved by your treatment. It is helpful to identify patients who rationalize their not working because of pain by asking at the outset what they plan to do with the level of improvement that you

estimate might be expected. Patients who use their pain as the reason for not working often indicate that they only know one form of heavy work and would return to that. Obviously, the likelihood of this is remote in patients with severe physical impairments as well as chronic pain. Answers such as this should be shared with the psychologist or vocational counselor. We ask our psychologists to explore these issues with the patient as part of their initial workup. This issue goes along with what the patient proposes to do with the outcome of your treatment. Again, we find this to be an important enough issue to ask about. It is an important part of your evaluation. Leave it to others to discuss its ramifications with the patient, because investigating it can become too time-consuming for you; however, do not ignore it just because you do not have the time.

#### *Social issues*

There are a variety of social norms and consequences that affect the chronic pain patient and influence outcomes. It might be socially acceptable in the patient's sphere for a person to stop doing a specific job at a certain point. For example, long-haul truck drivers commonly stop in their fifth and sixth decades of life; however, this becomes a problem if retiring is not personally acceptable to the patient. It is important to ask from others who are evaluating the patient what social issues are present and what might be their impact. Obviously, this information takes time not usually available to the surgeon; however, it should not be ignored as part of the patient's evaluation.

#### *Psychologic factors*

The literature on the psychologic aspects of chronic pain is vast. Because of its complexity, it is appropriately delegated to mental health professionals in patient evaluation. Nevertheless, there are some important aspects that affect surgical decision making. Be sure to get at least basic information on these issues.

#### *Substance abusers*

In general, people do not abuse addictive substances because they have pain [43]. There are usually a number of personal, attitudinal, and personality reasons behind abuse. Although the surgeon does not need to evaluate these, their impact can severely impair expected outcomes. A plan to deal with these issues is a minimal

requirement for preoperative planning. Obviously, some of these issues need to be treated before you can proceed with your procedure.

#### *Depression*

Consider that virtually all complex chronic pain patients are depressed. The severity of their depression can have an impact on outcome. The mechanisms at work in your patient must be explored if you use preoperative psychologic evaluations. There is much that a depressed patient can do to help to minimize depression and its effects. Depression in the complex chronic pain patient should not be looked on as something that is treated with a pill. Depressive symptoms can be improved by a variety of activities that the psychologist can outline. Improving depression beforehand can have a positive impact on your outcome.

#### *Personal relationships*

Codependency behavior is common in the families of complex chronic pain patients. These relationships can have a negative impact because they tend to maintain the current status and are commonly not supportive of improvement or change. Obviously, they need to be evaluated before you proceed. The psychologist can help significant others to find better ways of being "helpful." Resistance to efforts like this by the family should be looked on as a relative contraindication for surgical intervention.

#### *Other psychologic issues*

There are many other important psychologic issues that affect your care and its results. It is important that the psychologic review include those that do.

The issue is not whether or not psychologic barriers exist. The important point is that they be identified and their importance to each patient be explored. Efforts to minimize any negative influences should precede your intervention. Response to remedial efforts can provide a clear prediction of what is likely after your procedure. If you impugn that psychosocial factors were influential in the patient's prior treatment failure, they remain before your treatment unless they have been controlled. Their negative impact can be greater than any positive effects of remarkable pain relief from your proposed treatment. Again, the important question for your psychologist is not whether or

not psychologic issues contraindicate your procedure; the important question is, “what effects will the existing psychologic issues likely have on the outcomes?”

### Understanding secondary gains

In our experience, many surgeons have trouble understanding the concept of secondary gains. The evaluation of their presence should be an important part of the preoperative psychologic assessment of the complex pain patient. Secondary gains can be defined as the inappropriate use of pain complaints by the patient to justify a variety of needs [39]. In other words, the patient’s complaints provide some degree of solution for problems for which the patient has found no better means of resolution. By themselves, secondary gains might not influence outcome. When there are many secondary gains important to the patient, however, it might be difficult for the patient to give up the pain complaints to others even though she or he tells you how effective your treatment was and how much better everything is. The importance to you is that secondary gains can preclude patient participation at a more involved level in family issues, work return, participation in rehabilitative efforts, and depression treatment. The psychologist should be able to discuss with you how the secondary gains present in your patient are likely to affect her or his behavior after the procedure. Please note that it is a rare patient who does not have some secondary gains from her or his complaints. At issue is how these affect the prognosis. That is the question you should ask your psychologist to answer. In short, the surgeon does not need to know what the secondary gains might be, but the preoperative assessment should include how those that are present may affect outcome.

Sometimes, it is possible to direct the needs of the patient toward more appropriate means of satisfaction. This should also be explored as part of the psychologic assessment. For example, a patient who truly does not believe that return to work is a reasonable option can be helped by making that decision overt. Commonly, the patient will express that pain is the justification for not working. This mechanism often makes it difficult for the patient to extol her or his outcome to others. If the medical condition warrants its support, this issue can be fully resolved before your procedure. Then there will not be such need for the patient to focus on pain as a justification for not working after your procedure. The

difference is that the patient now can more easily concentrate on her or his improved state instead of the residual pain. Similarly, the effects of other secondary gains can often be minimized once they are identified.

Some commonly seen secondary gains from pain behavior include relief of pressure to be the breadwinner, removal of the need to “compete,” reduced financial responsibility, explanation for reduced physical capacity, and explanation for poor self-esteem. You can easily appreciate how relieving the pain by itself is not likely to fix these issues. Some of these issues are usually present in the more simple pain problems as well; however, their magnitude and impact on the complex chronic pain patient are the issues.

### Compensation systems and their effects

Each state has its own workers’ compensation system; federal employees work under another, the Federal Employees’ Compensation Act (FECA). Long shore workers and those who build boats work under the Long Shore and Harbor Workers’ Act, and railroaders work under the Federal Employers’ Liability Act (FELA). There is also Social Security retirement (SS), Social Security Disability Insurance (SSDI), Supplemental Security Income (SSI), and a myriad of medical and retirement plans. It is impossible for the busy physician to comprehend the nuances of each. Nevertheless, it is important for the patient that the preoperative assessment include how what is done or written will affect whatever claims might be present. Some truths can be helpful:

1. Most people who receive SSDI do not return to work [32]. Thus, return-to-work issues might not be so important in the evaluation of the patient unless the pain is used for secondary gain. If the patient has applied for SSDI, she or he has basically decided not to return to work. Thus, return-to-work issues should be eliminated. The complex patient commonly is applying for SSDI and telling you at the same time that she or he plans to return to work. This discrepancy has a major negative impact on outcome.
2. There is usually a discrepancy between SSDI and State Workers’ Compensation awards. For example, SSDI only provides for 100% total disability, whereas state systems provide for partial disability. Thus, a patient might have received SSDI (100% disability), whereas

the state has only given a small percentage. It is important that the patient understand this disparity before the pain procedure.

3. Issues regarding return to work and impairment ratings vary. It is important to resolve whatever questions remain.
4. A patient with SSI might suggest to you that she or he had never worked much to begin with. SSI was set up for people who had not worked enough quarters to qualify for SSDI or SS.

Obviously, this is not the proper venue for a primer on compensations systems, but you can see how much of an impact each of the systems can have on your patient's prognosis if these issues are not identified at the outset.

In a real sense, a major impact of your care is likely to be determined by the answer to a fundamental question: "What does the patient plan to do with the improvement you offer?" Too often, we have found that patients really had not thought about that issue. It is likely that the answer to this one question is the most informative part of your evaluation of the complex pain patient. Because of the time usually consumed by its answer, you might want to delegate this to others. Because of its importance and the information it provides regarding prognosis, however, consider asking it of a few selected patients. Patients who have inappropriate expectations are likely to do poorly. Return to jobs that are not possible or no longer exist, ability to play with children (who might now be grown and have their own children), improved relationships with spouses in maladaptive relationships, return of sexual prowess, and futures without limits are commonly heard. "Listen doc, you fix my pain and I'm going back to work" is too often the mantra of the patient who later fails to thrive after pain improvement. The evaluation of the patient requires the inclusion of future plans.

A common surgical approach for the patient with musculoskeletal pain is to fix the pathologic condition and then base additional treatment on how the patient does. This is appropriate for most back and neck pain patients, because most do quite well after their operations. We usually reserve additional care and treatment for those who later do not thrive. Probably the most fundamental difference that defines the complex chronic pain patient is that waiting for the outcome is not appropriate regarding the planning of future care. By having a plan of treatment in place before your procedure, your patient can

start rehabilitation efforts at once. The benefit of the improvement in the first few days and weeks is sometimes lost, because the patient is just waiting for something to happen. Most complex chronic pain patients will have residual symptoms after successful pain operations. The goal is to have a plan for these beforehand.

## Summary

The evaluation of the complex chronic pain patient should be different than for the patient with a simple pain problem. The former requires a team approach. It is important that the neurosurgeon contemplating a pain-relieving operation get the best information that is likely to have an impact on outcome. This should include the following:

1. Some way to extract the appropriate information contained in the patient's medical records.
2. Physical factors that have a negative impact on prognosis.
3. Psychologic information, including return-to-work decisions, medication use issues, meaning of prior successes, negative environmental factors, codependency issues, secondary gains and their impact, presence of pain games, negatively acting financial considerations, impact of depression, presence of poor role models, impact of pain on general functioning, and the patient's future plans.

Consider that just like a successful operation is a symphony of relatively simple harmonious parts, so, too, is the assessment of the complex chronic pain patient. The complexity of the patient and her or his predicament should not impair your ability to understand her or his real needs. The appropriate assessment of the patient requires that issues other than the pain itself be factored into the decisions about interventions. In the end, it is not appropriate to suggest afterward that psychosocial factors were the major cause for a poor result when nothing had been done about the same factors that had been present before the procedure.

## References

- [1] Hadjistavropoulos HD, Asmundson GJ, LaChapelle DL, Quine A. The role of health anxiety among patients with chronic pain in determining response to therapy. *Pain Res Manage* 2002;7:127–33.
- [2] Dworkin RH, Handlin DS, Richlin DM, Brand L, Vannucci C. Unraveling the effects of compensation, litigation, and employment on treatment response in chronic pain. *Pain* 1985;23:49–59.

- [3] Painter JR, Seres JL, Newman RI. Assessing benefits of the pain center: why some patients regress. *Pain* 1980;8:101–13.
- [4] de Lissovoy G, Brown RE, Halpern M, Hassenbusch SJ, Ross E. Cost-effectiveness of long-term intrathecal morphine therapy for pain associated with failed back surgery syndrome. *Clin Ther* 1997;19:96–112.
- [5] Slosar PJ, Reynolds JB, Schofferman J, Goldthwaite N, White AH, Keaney D. Patient satisfaction after circumferential lumbar fusion. *Spine* 2000;25:722–6.
- [6] Deer TR. Current and future trends in spinal cord stimulation for chronic pain. *Curr Pain Headache Rep* 2001;5:503–9.
- [7] Kumar K, Toth C, Nath RK. Deep brain stimulation for intractable pain: a 15-year experience. *Neurosurgery* 1997;40:736–46.
- [8] Wallace MS. Treatment options for refractory pain: the role of intrathecal therapy. *Neurology* 2002;59(suppl 2):S18–24.
- [9] Saal JA, Saal JS. Intradiscal electrothermal therapy for the treatment of chronic discogenic low back pain. *Clin Sports Med* 2002;21:167–87.
- [10] Prager J, Jacobs M. Evaluation of patients for implantable pain modalities: medical and behavioral assessment. *Clin J Pain* 2001;17:206–14.
- [11] Anderson VC, Burchiel KJ. A prospective study of long-term intrathecal morphine in the management of chronic nonmalignant pain. *Neurosurgery* 1999;44:289–300.
- [12] North RB, Kidd DH, Wimberly RL, Edwin D. Prognostic value of psychological testing in patients undergoing spinal cord stimulation: a prospective study. *Neurosurgery* 1996;39:301–10.
- [13] Penny KI, Purves AM, Smith BH, Chambers WA, Smith WC. Relationship between the chronic pain grade and measures of physical, social and psychological well-being. *Pain* 1999;79:275–9.
- [14] Turk DC, Okifuji A. Psychological factors in chronic pain: evolution and revolution. *J Consult Clin Psychol* 2002;70:678–90.
- [15] Berger E. Late postoperative results in 1000 work related lumbar spine conditions. *Surg Neurol* 2000;54:101–6.
- [16] Marhold C, Linton SJ, Melin L. Identification of obstacles for chronic pain patients to return to work: evaluation of a questionnaire. *J Occup Rehabil* 2002;12:65–75.
- [17] Mayer T, McMahon MJ, Gatchel RJ, Sparks B, Wright A, Pegues P. Socioeconomic outcomes of combined spine surgery and functional restoration in workers' compensation spinal disorders with matched controls. *Spine* 1998;23:598–605.
- [18] McGregor AH, Hughes SP. The evaluation of the surgical management of nerve root compression in patients with low back pain: part 2: patient expectations and satisfaction. *Spine* 2002;27:1471–6.
- [19] Klekamp J, McCarty E, Spengler DM. Results of elective lumbar discectomy for patients involved in the workers' compensation system. *J Spinal Disord* 1998;11:277–82.
- [20] Mayer T, McMahon MJ, Gatchel RJ, Sparks B, Wright A, Pegues P. Socioeconomic outcomes of combined spine surgery and functional restoration in workers' compensation spinal disorders with matched controls. *Spine* 1998;23:598–605.
- [21] Patient Stories. Available at: <http://www.back.com/patient>.
- [22] Gatchel RJ. A biopsychosocial overview of pre-treatment screening of patients with pain. *Clin J Pain* 2001;17:192–9.
- [23] Wilkinson HA, Davidson KM, Davidson RI. Bilateral anterior cingulotomy for chronic non-cancer pain. *Neurosurgery* 1999;45:1129–34.
- [24] McCracken L, Evon D, Karapas E. Satisfaction with treatment for chronic pain in a specialty service: preliminary prospective results. *Eur J Pain* 2002;6:387–93.
- [25] Krames ES. Intrathecal infusional therapies for intractable pain: patient management guidelines. *J Pain Symptom Manage* 1993;8:36–46.
- [26] Anderson SR. A rationale for the treatment algorithm of failed back surgery syndrome. *Curr Rev Pain* 2000;4:395–406.
- [27] Coskun E, Suzer T, Topuz O, Zencir M, Pakdemirli E, Tahta K. Relationships between epidural fibrosis, pain, disability, and psychological factors after lumbar disc surgery. *Eur Spine J* 2000;9:218–23.
- [28] Descarreaux M, Normand MC, Laurencelle L, Dugas C. Evaluation of a specific home exercise program for low back pain. *J Manipulative Physiol Ther* 2002;25:497–503.
- [29] Anema JR, Van Der Giezen AM, Buijs PC, Van Mechelen W. Ineffective disability management by doctors is an obstacle for return-to-work: a cohort study on low back pain patients sicklisted for 3–4 months. *Occup Environ Med* 2002;59:729–33.
- [30] Kool JP, Oesch PR, de Bie RA. Predictive tests for non-return to work in patients with chronic low back pain. *Eur Spine J* 2002;11:258–66.
- [31] Weisberg MB, Clavel AL Jr. Why is chronic pain so difficult to treat? Psychological considerations from simple to complex care. *Postgrad Med* 1999;106:141–2, 145–8, 157–60.
- [32] Rucker KS, Metzler HM. Predicting subsequent employment status of SSA disability applicants with chronic pain. *Clin J Pain* 1995;11:22–35.
- [33] Kendall NA. Psychosocial approaches to the prevention of chronic pain: the low back paradigm. *Baillieres Clin Rheumatol* 1999;13:545–54.
- [34] Jensen MP, Turner JA, Romano JM. Changes in beliefs, catastrophizing, and coping are associated with improvement in multidisciplinary pain treatment. *J Consult Clin Psychol* 2001;69:655–62.
- [35] Hubley-Kozey CL, Vezina MJ. Muscle activation during exercises to improve trunk stability in men with low back pain. *Arch Phys Med Rehabil* 2002;83:1100–8.

- [36] Jamison RN, Stetson BA, Parris WC. The relationship between cigarette smoking and chronic low back pain. *Addict Behav* 1991;16:103–10.
- [37] Vogt MT, Hanscom B, Lauerman WC, Kang JD. Influence of smoking on the health status of spinal patients: the National Spine Network database. *Spine* 2002;27:313–9.
- [38] Sharp TJ, Nicholas MK. Assessing the significant others of chronic pain patients: the psychometric properties of significant other questionnaires. *Pain* 2000;88:135–44.
- [39] Caldwell AB, Chase C. Diagnosis and treatment of personality factors in chronic low back pain. *Clin Orthop* 1977;129:141–9.
- [40] Roberts AH, Sternbach RA, Polich J. Behavioral management of chronic pain and excess disability: long-term follow-up of an outpatient program. *Clin J Pain* 1993;9:41–8.
- [41] O'Grady M, Fletcher J, Ortiz S. Therapeutic and physical fitness exercise prescription for older adults with joint disease: an evidence-based approach. *Rheum Dis Clin North Am* 2000;26:617–46.
- [42] Krause N, Dasinger LK, Deegan LJ, Rudolph L, Brand RJ. Psychosocial job factors and return-to-work after compensated low back injury: a disability phase-specific analysis. *Am J Ind Med* 2001;40:374–92.
- [43] Reid MC, Engles-Horton LL, Weber MB, Kerns RD, Rogers EL, O'Connor PG. Use of opioid medications for chronic noncancer pain syndromes in primary care. *J Gen Intern Med* 2002;17:173–9.