

## Psychiatric Assessment of Chronic Pain

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The subject of pain used to be considered the province of the physiologist, physician, and surgeon. In a prominent medical textbook written over 20 years ago, pain was simply defined as “that sensory experience evoked by stimuli that injure” (Mountcastle, 1968). This explanation of tissue damage that generates nervous impulses along recognised pain pathways is appropriate for acute pains. But if pain persists beyond the normal time of healing, which is normally less than three months but can be as long as six months, the correspondence between extent of injury and pain sensation is much less precise.

A number of people with chronic pain show no demonstrable evidence of nerve or tissue damage although many of these individuals will have sustained injury in the past. It is for this reason that the taxonomy committee of the International Association for the Study of Pain have defined pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage”. The Committee amplified this definition by stating that “activity induced in the nociceptor and nociceptive pathways by a noxious stimulus is not pain, which is always a psychological state . . .” (Merskey, 1979).

This considerable change of emphasis has been brought about from work on experimentally induced pain (Hardy *et al*, 1952), through the accumulated evidence that emotional factors profoundly affect the intensity of pain (Beecher, 1956; Melzack *et al*, 1982), and the fact that many patients presenting with painful complaints have few organic signs but exhibit prominent depression and anxiety (Walters, 1961). The “gate” theory (Melzack & Wall, 1965) has provided a convincing hypothesis of how psychological factors affect the perception and evaluation of pain.

Like all unpleasant experiences, particularly if sustained, pain has emotional consequences. It is therefore not unexpected that psychiatrists are involved with patients who have chronic pain. The surprise is that there are so few. There are almost 250 pain-relief clinics in the UK but fewer than 10% have a regular psychiatric input. There is greater psychological involvement and this may have more relevance (Tyler, 1985). The purpose of this annotation is to assist the psychiatrist in the

evaluation of psychiatric and psychological factors in patients with chronic painful problems.

The assessment of a patient with long-standing pain requires first and foremost an accurate evaluation of the degree and extent of organic pathology. Current physical signs and past tissue damage both need assessment. For this reason it is advisable for the psychiatrist working with patients with chronic pain to have the assistance of colleagues who are experienced in the evaluation of physical pathology. Although many pain clinics have contributions from physicians from two or more disciplines, the wider the physical knowledge of the assessing psychiatrist the better he/she is able to assess the impact of emotional factors. At the same time, the presence of a psychiatrist in the pain clinic helps non-psychiatric colleagues to assess emotional factors. In a recent study, the diagnostic confidence of physicians in assessing psychiatric illness in a clinic where there was a regular psychiatric input was 73% (Michie *et al*, 1991).

### Factors in history and examination

At first assessment, as full a record as possible of all past treatments and interventions should be obtained. The results of any investigations that have been carried out on the patient should be at hand and these should be explained to the patient in language that he/she can understand. A good deal of anxiety is caused by erroneous evaluation of symptoms by patients. Information given to them by doctors or nurses in hospitals is also often misinterpreted and may be the source of considerable anxiety.

It is helpful to ask patients what they believe is the cause of both their present and past pains. Many patients describe their pains using medical terms which have different meanings to the patient and doctor. For example, the word ‘arthritis’ has been described to me by separate patients as “a grinding down of all the bones” and as “stiffening of the joints so that they lock together and you cannot get them unstuck”.

An accurate account should be obtained of the circumstances surrounding the onset of the pain. How far did it follow physical damage, either from

injury or from disease? Even when there is a clear organic cause for the pain, it is important not to overlook the psychological and psychiatric state of the patient at the time injury or disease occurred or was recognised.

Inquiries should be made about the intensity of the pain. The concept of a visual analogue scale with ratings from 0 to 10 signifying intensity of pain is a useful one and is understandable to most patients. If necessary, this can be supplemented by the recording of the degree of pain on a 10 cm line (Scott & Huskisson, 1976). Inquiry should be made of the degree of fluctuation of pain during the day and whether the intensity of the pain has increased, remained the same, or been variable since the pain complaint started. There is a correlation between increasing intensity of pain and the presence of psychiatric illness (Tyrer *et al*, 1989).

Questions that should be addressed about the nature of the patient's pain are as follows:

- When did your pain first start?
- Where do you feel your pain?
- When does your pain occur?
- How severe is your pain and how does this change throughout the day?
- What is the effect of movement and change in posture on your pain?
- What other factors (a) make your pain worse, (b) make it better?
- What do you now do less frequently and what do you do more frequently since you developed the pain?
- Does your mood affect your pain?
- What effect do drugs have on your pain?

Pain that is accurately localised in particular dermatomes, that is described with such adjectives as sore, boring or nagging, that is exacerbated markedly by particular movements and which is sufficient to wake the patient from sleep is likely to be associated with an organic cause. Conversely, pain that occurs in multiple sites in the body, that has increased in area over time, which is described as frightful, dreadful or punishing, which is not affected by specific movements, that does not wake the patient from sleep, and which is barely affected by analgesic drugs or by physical treatments such as transcutaneous electrical nerve stimulation (TENS), is more likely to be found in patients who have some contribution from psychological and psychiatric factors to their pain. These factors are more likely to be secondary to organic pathological causes or behavioural contingencies; pure psychogenic pain is rare.

After the history, the patient should be examined. If the psychiatrist carries out this procedure it will

help to give him a much better understanding of the extent of organic factors that are contributing to the painful complaint. Patients are also more likely to accept explanations about the origin of their pain from a doctor who has examined them. Warning signs that have been associated with non-organic pathology include over-reaction to examination, weakness of all muscle groups in a particular region of the body, superficial tenderness, production of pain when manoeuvres are employed which the patient thinks will cause pain but in fact do not affect body mechanics, e.g. pressure on head, and variable performance when distracting tests are used, e.g. increased ability to straight leg raise when examining a patient while sitting (Waddell *et al*, 1980).

However, the examiner must beware of attributing a psychogenic cause to the patient's pain on the basis of inappropriate signs on examination. It is frequent for physicians to erroneously diagnose hysteria in patients who exhibit physical signs that do not appear to obey anatomical precepts. Pain that affects circumscribed regions of the body and is not dermatomic in distribution (Wall, 1989), and which alters in site according to suggestion by others (Gould *et al*, 1986) is found with neurological lesions. In the same way that elicitation of reflex anal dilatation in a child does not indicate sexual abuse unless there is strong corroborative evidence from other sources, the presence of traditional, non-anatomic neurological signs in a patient complaining of chronic pain does not signify a psychogenic aetiology. If further investigation discloses that the symptom solves a problem for the patient and may be alleviated by psychological or environmental change, and that it corresponds to an idea held by the patient, the diagnosis of hysterical pain will be appropriate (Merskey, 1988). This is a rare diagnosis. However, when there is a considerable disparity between symptoms and signs this should encourage the examiner to look for factors other than physical ones to explain them.

At this stage, the doctor should have a reasonable idea of the physical diagnosis and how pain and other symptoms are affecting the patient's life. It is useful to ask a number of questions about the pain at this point. These include:

- (a) Is there evidence of existing physical disease or past tissue damage?
- (b) If so, has pain persisted beyond the time that healing would have been expected to take place?
- (c) Is there evidence of psychiatric illness, and if this is present is it primary or secondary?

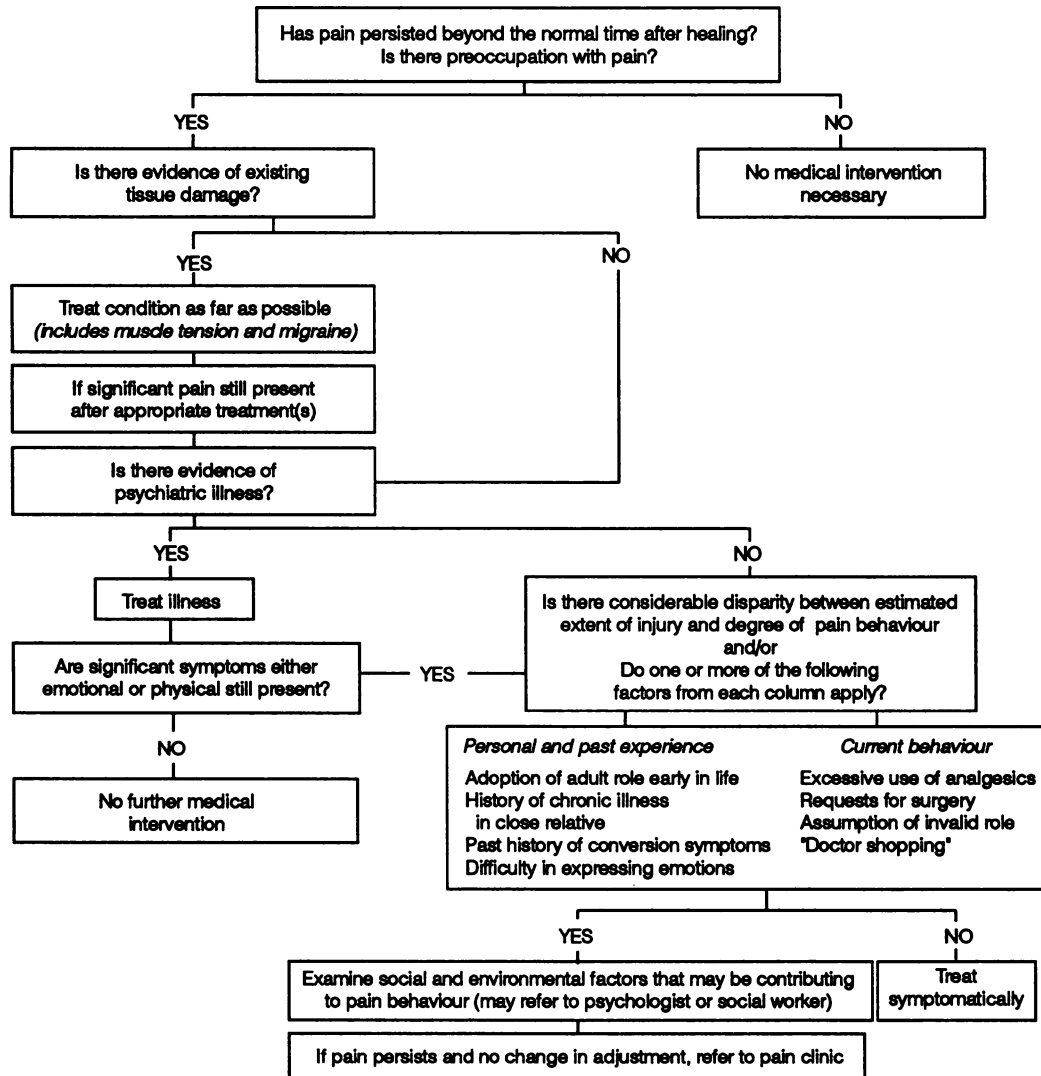


Fig. 1 Schema for assessment of psychological and psychiatric factors in chronic pain.

- (d) Are there any emotional conflicts or psychosocial problems that were associated with the onset of the pain or with its maintenance?
- (e) Is there any suggestion of intentional production or feigning of symptoms?

A good deal of knowledge of the patient's history, previous personality, recent life events and conflicts, and other social and cultural factors are needed to determine how far these are affecting the production of the painful complaint. For these

reasons, the most difficult question to answer immediately is the fourth. A suggested schema to help in the assessment of such problems is illustrated in Fig. 1. This figure is only a guide. Many people with chronic unexplained pain, whatever its origin, are understandably seeking an answer to their pain, see a number of doctors and emphasise the effects of pain on their wellbeing.

The inexperienced observer is inclined to over-emphasise the contribution of organic pathology in individuals who complain of persistent pain. However, as psychiatrists are used to examining for

evidence of psychiatric illness and many patients with chronic pain are in psychological distress, there is a tendency once the examiner has seen a number of patients with chronic pain to neglect the extent of organic factors in causing pain. Virtually all patients have contributions from organic, psychiatric, personality and sociocultural factors in determining their response to chronic pain, and the skill of the pain therapist is in evaluating the extent of these components. To aid in this task, the following techniques, investigations and instruments can be used.

### Assessment instruments

#### Description and intensity of pain

Three main classes of word descriptors have been found to describe pain: sensory, emotional, and intensity (Melzack & Torgerson, 1971; Turk *et al*, 1985). Adjectives to describe pain that fall into the sensory category include burning, crushing, sharp, sore, and throbbing. Words that have an emotional or affective quality comprise agonising, dreadful, exhausting, punishing, and sickening. The intensity of pain is described by words such as weak, moderate, strong, intense, severe, and excruciating. A check-list of 78 words describing pain states, the McGill Pain Questionnaire, is widely used in this context (Melzack, 1975).

The number of words selected on the McGill Pain Questionnaire is most closely associated with the intensity of the pain felt (Melzack, 1975). It is not too surprising that it is in these cases that psychological distress is most apparent. Although patients who use a greater number of affective or mood-related pain words are more likely to rate positively on psychological and psychiatric scales for distress and illness (Leavitt & Garron, 1979), in most studies this relationship is not very close.

The intensity of the pain described also relates to emotional factors. Both the intensity of present pain (Benjamin *et al*, 1988) and past pain (Tyrer *et al*, 1989) have been shown to be directly associated with psychiatric illness in patients attending a pain clinic.

#### Cognitive factors

The significance attached to the sensation of pain depends upon its meaning to the sufferer. Constant pain following an operation is interpreted differently from similar pains that arise *de novo*. The patient's own appraisal of the extent to which pain interferes with previously desired activities and subsequent feelings of helplessness and reduced self-control has

been found to predict the development of depression (Rudy *et al*, 1988) and disability (Flor & Turk, 1988). These findings are important; they tell us that it is not the severity of disease or intensity which determines the degree of disability but the beliefs of the patient about how far this is the case. In particular, the beliefs that pain is going to endure, that its cause is unknown, and uncertainty about its effects lead to demoralisation, depression and self-worthlessness (Williams & Thorn, 1989).

The doctor's attitude and reaction to the patient's assumptions is crucial. In addition to providing a satisfactory explanation for the pain and the prognosis of the condition, the physician should try to understand and acknowledge the extent of the pain and the limitation this causes. The patient's perceptions may be faulty because he has pain but the physician is often biased in the opposite direction because he is pain-free and may never have experienced extreme pain. Physicians recovering from operations have found that the doctors looking after them had much less serious an opinion about the severity of their patient's pain than the sufferer. The doctor will do well to recall the old Arab saying about a man experiencing severe toothache who describes his pain as being worse than two thousand dead in Jerusalem.

During the history and examination of the patient, inaccurate beliefs about the origin and duration of the pain should have been identified. However, if a more precise evaluation of faulty thoughts and beliefs about pain is required this can be obtained by administering the Cognitive Errors Questionnaire (Smith *et al*, 1986). This is helpful if specific attention is proposed to alter cognitions in a structured way.

#### Psychiatric factors

There are three main ways in which psychiatric illness can be manifest in the form of pain, by hysterical or hypochondriacal mechanisms, in the context of a depressive illness, and occasionally as part of a delusory system.

Many patients with chronic pain are found to exhibit elements of hysteria and hypochondriasis. Hysterical in this context means the exhibition of a symptom, or loss or reduction in physical functioning, which suggests physical disorder but which cannot be explained entirely on a physical basis. It is rare, however, for patients to have the full syndromes of conversion hysteria or hypochondriacal neurosis. It is rather that with a symptom such as pain, which cannot be observed by another, attempts to explain the symptom result in behaviour which may be interpreted as hysterical

or hypochondriacal. Such behaviour is not surprising. At the time of the first symptoms, the patient will usually have been examined in detail and investigations carried out. Usually the patient has been led to believe that he/she has a physical illness, and the investigations will show what this is. If pain persists in the absence of abnormal laboratory and radiological investigations, further tests are likely to be made which further reinforce the patient's opinion that there must be something wrong. If, after all these procedures, no diagnosis can be made, the patient is understandably frustrated and further symptom exaggeration and non-organic signs may develop.

In the same way, the full triad of symptoms in hypochondriacal neurosis – persistent belief of illness, fear of the illness, and preoccupation with bodily symptoms (Pilowsky, 1967) – is not usually found. Most patients are convinced that they have an organic disease but it is rare for them to be fearful of this and indeed the opposite is usually the case. Patients are almost always relieved if they are told that they have a particular disease, as long as this is not progressive and does not affect mortality in the short-term. Even if there is no treatment for the disease condition they are pleased with this information. "I always knew there was something wrong, doctor. Now you have put my mind at rest".

When hysterical and hypochondriacal symptoms and signs are present they will be detected during the history and examination. The assessment of behaviour resulting from these mechanisms is considered in the section on pain behaviour.

Depression is frequently associated with chronic pain (Roy *et al.*, 1984). Between 30% and 40% of patients attending chronic pain clinics fulfil operational criteria for depression (Kramlinger *et al.*, 1983; Tyrer *et al.*, 1989). A significant proportion of these patients have biological symptoms of depression with failure of dexamethasone to suppress cortisol secretion (France & Krishnan, 1985) and reduced binding affinity of [<sup>3</sup>H]-imipramine binding to platelet membranes (Mellerup *et al.*, 1988). Antidepressants are often effective in these patients (Feinmann *et al.*, 1984).

Self-rating and observer depression instruments can help in the diagnosis of depression in this population. The most efficient and customary way of using these questionnaires is to employ the self-rating scales as screening instruments to detect emotional factors and to interview in depth those who score highly on these. The Beck Depression Inventory (Beck *et al.*, 1961) and the General Health Questionnaire (GHQ) (Goldberg, 1972) have been widely used in this area.

If cognitive treatment is available, the Beck scale is valuable, as cognitive symptoms in depression are well represented among the items in this instrument. Patients scoring 15 or more, particularly if those questions concerned with cognitive factors are emphasised, may benefit from referral to a psychologist or psychiatrist. The GHQ has some utility but a higher cut-off point (above 11 on the 28-item questionnaire) needs to be used in identifying patients with chronic pain who have psychiatric disturbance, than in a general population sample (Tyrer *et al.*, 1989; Benjamin *et al.*, 1991). This is not unexpected; a number of the symptoms directly associated with chronic pain are also prime symptoms in depressive illness. For instance, many patients with chronic pain complain of poor sleep, feel slowed up, and are irritable because of their pain.

To avoid the contamination of these physical factors in the assessment of depression, Zigmond & Snaith (1983) developed the Hospital Anxiety and Depression (HAD) Scale. Because of its design, this questionnaire may have greater utility than many in assessing depression in this population. The forerunner of this scale, the Leeds Scale for Anxiety and Depression (Snaith *et al.*, 1976) was found to provide the best discrimination between psychiatric and non-psychiatric cases among four widely used self-assessment schedules (Tyrer *et al.*, 1989). However, in common with other scales designed for assessment of patients with chronic illness, a higher cut-off score for the identification of depression and anxiety needs to be used if the HAD is used as a screening instrument. Preliminary analysis in the Newcastle Pain Relief Clinic shows that the diagnostic confidence of this instrument is best when the cut-off score is 11/12 for depression and 13/14 for anxiety. The sensitivity of this scale using these criteria was 86%, in a sample of 100 patients (unpublished data).

Observer-rating scales for depression in chronic pain by contrast are rarely used except for research purposes. It may be simpler to ask for specific symptoms of illness. Identification of depression in general practice has been reliably predicted if at least one positive response is made to questions concerned with low energy, loss of interest, loss of confidence, and feelings of hopelessness (Goldberg *et al.*, 1988). Another schema that may be employed to help in diagnosis is the administration of the operational criteria of DSM-III-R (American Psychiatric Association, 1987), ideally by using the Structured Clinical Interview for DSM-III-R (SCID) (Spitzer *et al.*, 1990).

Occasionally, an acutely psychotic patient may complain of pain because of his beliefs. The case of the man who believed he was Jesus Christ on the

road to Calvary and complained of pain in a band around his forehead is an example. The mechanism of pain in such cases is easily elicited as long as an adequate history can be obtained.

Muscle tension can of course give rise to pain and many patients attending pain clinics have pain from this source. Many are found to have bands of contracted muscles and the term myofascial pain syndrome has been used to describe patients with this complaint (Travell, 1976). Although there is some relationship between psychic anxiety and myofascial disease (Fishbain *et al*, 1986), this relationship is not close. Assessment by physical examination is of more value in these cases than using instruments to assess anxiety.

### Pain behaviour

Although what patients say about the severity of their pain and the degree to which they have reduced their previous activities are related, direct observation does not usually reveal a close association between these measures. The best way of determining behaviour is for observers to record directly the amount of time a person lies down, sits, stands and partakes in various activities. It is not usually feasible to carry this out successfully in normal clinical practice and it has been shown that if subjects themselves record this behaviour at hourly intervals on an appropriate form, a reasonably good approximation can be made of actual activities (Fordyce *et al*, 1984).

Opinions vary about whether pain levels should be recorded on such forms. One disadvantage of this is that the patient is encouraged to concentrate on the pain throughout the day. However, it is a valuable assessment exercise at the start of treatment to determine what factors are associated with amelioration of pain and which activities make it worse. This exercise also enables the clinician to directly challenge faulty statements by the patient, e.g. "in the afternoons, my pain couldn't be worse", when their recorded diary shows that there are many occasions when the listed pain at this time is not of maximum intensity.

Other information that can usefully be obtained includes the frequency of visits to doctors, admissions to hospital and the number of operations. These all represent manifestations of pain behaviour, whether this is justified or not. High figures in any of these categories is associated with increased disability and distress and a poorer prognosis (Heaton *et al*, 1982). Pain behaviour at interview can be measured by counting the number of times the subject grimaces, limps and guards his/her body (Keefe & Hill, 1985). Although this is a reliable and valid measure of pain

behaviour, such recordings only indicate the extent of this measure when the patient is in contact with the health care specialist. This may not be representative of their degree of pain behaviour elsewhere.

In their own home, patients' pain behaviour may be encouraged by their spouse or family (Moore & Chaney, 1985; Flor *et al*, 1987), and previous experience and personality factors may also lead to exhibition of this behaviour (Tyrer, 1986). Assessment of this aspect of the behaviour is not easy but information from a close family member can often provide useful pointers towards this.

Questionnaires are of limited value in this area. The Illness Behaviour Questionnaire (IBQ) (Pilowsky & Spence, 1975) has been widely used, and is able to distinguish clearly the self-reported beliefs and behaviour of patients attending a chronic pain clinic from those seen in general practice settings (Pilowsky & Spence, 1976; Tyrer & Peterson, 1987). However, the instrument is unable to distinguish patients with chronic pain and psychiatric difficulties from those who have fewer emotional problems (Tyrer *et al*, 1989). A shorter version of this questionnaire has been recently designed (Main & Waddell, 1987) and needs to be evaluated. A much simpler assessment instrument of function that indirectly measures pain behaviour is the Self Care Assessment Schedule (Benjamin *et al*, 1984).

A number of instruments have been developed which assess behavioural, cognitive and mood measures at the same time. A widely used example is the West Haven-Yale Multi-Dimensional Pain Inventory (WHYMPI) (Kerns *et al*, 1985). The reliability and validity of these instruments are still undergoing assessment but they may usurp many of the scales evaluating more discrete items.

### Predisposing factors to psychiatric illness in chronic pain

Certain social, economic, cultural, past history and personality features predispose towards individuals developing a chronic painful state. These were suggested as early as 1895 by Breuer and Freud (Freud, 1893-95). In 1959, Engel described a group of patients whom he regarded as "pain-prone". These patients were termed masochistic in that they seemed to court disaster, they had a history of numerous unsuccessful operations and they were chronically guilt-ridden. In the background of these individuals there was often a history of parental abuse, either physical or emotional, in which the expression of pain by the child was one of the few ways to gain a response from the parent. A typical example was a parent who punished his/her child

frequently but then suffered remorse and over-compensated with affection, so the child became accustomed to the sequence of pain and suffering being followed by love. Engel's views were all the more influential as he was both a professor of medicine and a professor of psychiatry.

Most patients attending pain clinics do not fall within Engel's "pain-prone" group. There are other features which are over-represented in patients attending chronic pain clinics. People who come from dependent families, particularly when there is a family history of disability or chronic long-term illness, are more prone to adopt the sick role (Edwards *et al.*, 1985). Manual workers and those with dissatisfying jobs tend to report more pain than white-collar workers (Nagi *et al.*; 1973). A high incidence of both physical and sexual abuse has been reported in the history of chronic pain patients in American clinics (Parris & Jamison, 1985).

The assessment of these factors is important to the physician both in terms of treatment and prognosis. When a full history is obtained it is clearer why patients have reacted in the way they have to adversity and illness.

The personality characteristics of patients developing chronic pain have been widely studied. However, most of the investigations have described personality features in patients who have been in pain for some years. Chronic pain affects attitudes and beliefs, and the personality characteristics assessed at the time of long-standing pain may not represent the previous personality type of the sufferer. It is unfortunate that most of the studies of personality in patients with chronic pain have been made using the Minnesota Multiphasic Personality Inventory (MMPI). The MMPI scales were designed originally to apply to patients with psychiatric illness having no physical illness. Pain and disability are associated with elevated scores on the Hypochondriasis, Hysteria, and Depression subscales of this instrument (Hagerdorn *et al.*, 1984; Ellerston & Klove, 1987). Previously it had been thought that this inverted V pattern on the graphed profile of the MMPI represented a personality type that was prone to develop chronic pain. It has since been shown that this picture is a result of having a chronic disability and is not due to a pre-existing personality type (Love & Peck, 1987).

The problem of disentangling the effects of chronic pain on the personality of the patient from the patient's pre-morbid state makes it difficult to make solid pronouncements on the personality type of patients who are prone to develop chronic pain. Studies have suggested that individuals with dependent and passive-aggressive personalities are found more

frequently in pain clinics (Fishbain *et al.*, 1986), and there are theoretical grounds for assuming that introspective personalities may also be pain-prone (Mechanic, 1986). Some patients have a hypochondriacal personality disorder. Others who are excessively concerned with somatic distress fulfil DSM-III-R criteria for hypochondriasis when they develop trivial physical illness (Barsky *et al.*, 1990).

Patients who somatise their mental distress, i.e. who present with physical symptoms when there is emotional conflict (Bridges & Goldberg, 1985; Goldberg & Bridges, 1988), can present to pain clinics. Patients who had high self-control and increased scores on a social desirability scale were also over-represented in a chronic pain sample (von Knorring *et al.*, 1987). A subgroup of these patients may have major difficulties in expressing their feelings; the term alexithymia has been used to describe these individuals (Sifneos, 1973). Some patients who value their physical prowess are prone to become very distressed when they sustain an injury or develop an illness which prevents them from exercising their bodies in their customary way. These individuals have been described as suffering from "Athlete's Neurosis" (Little, 1969). A number of patients seen in pain clinics fulfil the criteria for this description, which is often associated with a poor prognosis.

Future studies need to determine the personality of the patient before illness developed. This can be measured by using the Personality Assessment Schedule which relies on information provided by a close informant (Tyrer & Alexander, 1988).

#### Factors affecting response to treatment

A number of factors that render individuals vulnerable to chronic pain also adversely affect their response to treatment. Those that are unemployed at the beginning of treatment (Dworkin *et al.*, 1985), who are receiving compensation before treatment is given (Carron *et al.*, 1985), and who do not obtain treatment until many years after the onset of their pain (Stieg & Williams, 1983), have a poor prognosis in terms of their pain disability. Somatisers, i.e. people who express their emotional distress as physical symptoms, also do poorly (Sternbach, 1974). At the other end of the spectrum, patients who complain of a multitude of psychiatric symptoms also do not do well (Dworkin *et al.*, 1986). Religious faith and good educational attainment are associated with better adjustment (Croog, 1961).

Ultimately, successful adaptation to chronic pain depends upon the sufferer accepting the extent and handicaps due to the pain and recognising that his/her

own efforts are of greater importance than those of the doctors and other pain clinic professionals in improving quality of life. The degree to which this measure can be assessed is one of the functions of instruments that measure locus of control for beliefs (Rotter, 1966). A number of these exist, and that by Wallston *et al* (1978) can be recommended.

### Conclusion

The assessment instruments chosen to evaluate the emotional factors in chronic pain depend above all on the clientele that attend the clinic and the facilities that are available. An adequate history and examination is by far the most important part of assessment, but valuable additional information can be obtained by means of questionnaires and schedules (Williams, 1988).

The instruments described are not necessarily helpful in determining specific treatment. This can best be decided after all information is available. They are useful as a baseline measure of symptoms and functioning and can also help in determining prognosis and the intensity of intervention by professional staff. Symptoms and beliefs should be assessed separately.

The most useful questionnaires are the HAD scale as a screening test to detect depression and anxiety (Zigmond & Snaith, 1983), and the WHYMPI (Kerns *et al*, 1985) for the behavioural assessment of pain. An assessment of activity is useful and can either be assessed directly or by means of a pain diary (Fordyce *et al*, 1984). Locus of control questionnaires (Wallston *et al*, 1978) are helpful both in determining outcome before applying behavioural techniques and to determine ultimate prognosis.

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