Psychogenic Backache: The Missing Dimension

John E. Sarno, M.D.

New York, New York

Experience with a population of patients with the common complaint of low back pain suggests that a substantial proportion of these patients are suffering with pain of psychogenic causation. These patients appear to fall into one of three categories: those whose somatic pain is intensified by psychic factors, those who have what has been called conversion pain and a third group with pain due to excessive muscle tension. The theoretical basis for these states is described and a plea made for the inclusion of these etiologic categories in the differential diagnosis of low back pain. A brief diagnostic and therapeutic modus operandi is presented.

There is probably no group of disorders which afflict modern man that is more ubiquitous and more disturbing than the variety of pathologies which have low back pain as their major symptom. Despite the scientific methodologies that characterize the investigative and therapeutic armamentarium of today's medical practice, this problem still eludes solution. Perhaps it does so because it is not one but many diseases. Further, because the major manifestation of these conditions is pain, the problem is more complicated than it looks.

It is appropriate that family physicians should interest themselves in the ultimate solution of this problem since they are usually the first to see the patient and may hold the key to its solution in a substantial percentage of cases. It is common practice to refer intractable cases to specialists and just as commonly appreciated that the usual therapeutic measures such as restriction of activity, bed rest, lumbar corsets, a bed-board, a set of exercises, an injection, and even surgery often fail to solve the problem. It is proposed that many cases of low back pain are psychic in origin, and that much of the confusion which exists in the diagnosis and treatment of patients with backache results from the widespread tendency to attribute back pain in every case to some neurological or mechanical musculoskeletal derangement. This article will outline the evidence for psychogenic backache, describe our experience with this problem, and suggest some diagnostic and therapeutic approaches which should be helpful to family physicians caring for patients with this common problem.

From the Department of Rehabilitation Medicine, New York University School of Medicine, New York, New York. *This study was supported in part by the Social and Rehabilitation Service, Department of Health, Education and Welfare under the designation of New York University as a Rehabilitation Research and Training Center, and under Grant No. 23-P-55029/203.* *Requests for reprints should be addressed to Dr. John Sarno, Institute of Rehabilitation Medicine, 400 East 34th Street, New York, New York, 10016.*

Psychogenic Basis of Backache

In 1946 a short article appeared in the *New England Journal of Medicine* entitled "Psychosomatic Backache" by Sargent describing a population of patients seen in an Army Air Force Convalescent Hospital, all of whom had backache associated with a wide variety of neurotic symptoms.[1] These patients were from a much larger group brilliantly studied and described by Grinker and Spiegel.[2] Working with a concentrated population, a pure culture as it were, of human beings subjected to severe stress, these authors developed some keen insights into how people react to stress, who are the ones most likely to succumb to the strain, and what their personality patterns and social histories are. Sargent found that his patients with backache could be divided roughly into three categories: those with definite organic disease, a group with hysterical conversion symptoms and a

large segment with backache due to "muscular tension," interpreted as a somatic manifestation of nervous tension. Sargent, a surgeon, indicated that only four percent of an undisclosed number of patients (not disclosed for military reasons) were found to have organic back disease after thorough examination, X-rays and laboratory studies. Among those with hysterical conversion symptoms there were some with simple conversion symptoms and, more commonly, patients with a previous history of a back disorder who developed the old symptoms again in association with the stress of combat. This striking phenomenon has been observed in our clinic on numerous occasions, as exemplified by the insurance executive who suddenly developed severe back pain of a type for which he had been seen and treated two years previously, because the company which he had created and which had gone public was being threatened with takeover by an outside syndicate.

The present state of the diagnostic and therapeutic situation regarding backache was well summarized in an editorial in the *British Medical Journal*.[3] It was pointed out that in most cases of back pain a specific abnormality is not found. When congenital vertebral deformities or spondylosis are demonstrated radiographically, for example, their significance in the production of pain is usually doubtful. Reflecting this situation, these are some of the terms used to describe backache: fibrositis, fibromyositis, postural backache, ligamentous strain, lumbosacral strain, sacroiliac strain, lumbalgia, lumbosciatic pain, lumbosciatalgia, sciatica, lumbar radiculalgia, low back pain, lumbar pain. It is of interest that in this long list of diagnoses, none suggests either a primary or secondary contribution of the patient's psyche to the pain syndrome.

The present state of the diagnostic art in backache is such that no etiology, aside from degenerative disc disease, enjoys the support of scientific data. We are reluctant to add to this confusion by suggesting yet another diagnostic possibility. Still, the clinical evidence, a review of the literature and the growing awareness of the importance of the psyche in health and disease require that we re-examine the problem of low back pain with this dimension in mind. In support of this point of view, it has been reasoned that if a patient with backache of long duration in whom the etiology is suspected to be psychogenic can have alleviation of symptoms through some form of psychotherapy, one is justified in concluding that the etiologic diagnosis is correct.

It is becoming clear that pain is not simply a stimulus-response process. The identification of neurological pathways and the purely physiological parameters of the pain experience are not sufficient to explain the clinical phenomenon of pain. Adams has said, "I am convinced that the sound medical approach to the chronic pain syndrome is yet to be discovered: further that we shall not achieve a full understanding of the mechanism of chronic pain and the way in which it disturbs the human organism until we acquire more information concerning the anatomy and physiology of emotion. Chronic pain is more than a sensory abnormality — it is a global behavioral derangement that involves the totality of nervous function."[4]

The writings of Szasz,[5] Engel,[6,7] Grinker[8] and many others have presented compelling arguments relating pain to psychic states. A detailed psychodynamic explanation would not be appropriate here, but certain major characteristics of the pain-emotion process will be briefly mentioned.

Viewed from a basic psychological standpoint, all human beings develop associations between pain and certain emotional states via the fundamental learning process which we now call conditioning. In later life when a person experiences an emotional state, such as guilt, it may evoke the same painful state with which it was associated earlier in life. Szasz has developed the thesis that the experience of pain is itself an emotional or affective expression and as such derives its specific character in a given individual from that person's personality structure.[5] An implication of this view is that a person's response to a painful peripheral stimulus, such as a wound or an infection, will be determined by his personality structure and in such cases represents a warning that something is threatening the functional integrity of that person's body. Szasz and others have pointed out the communicative role of pain; the fact that it can be a cry for help, a complaint, an attack or retribution against someone. Anxiety may be stimulated by real or imagined threats to the integrity of the self or body or by the presence of hostility or resentment within the person himself. Unrelieved strain may result in ego regression and increased dependency. When hostility is turned inward against the ego, depression results. Our experience and that of many other workers is that depression is a frequent, almost universal, concomitant of conversion pain.

Wolkind and Forrest reported the use of a questionnaire to identify patients unlikely to respond to conventional treatment for low back pain and who required extensive social or psychiatric investigation.[9] They utilized a self-rating scale of psychoneurotic symptoms and behavior known as the Middlesex Hospital Questionnaire. The subjects were 50 consecutive male patients without evidence of degenerative disc disease referred to a physiotherapy department for treatment of low back pain. There was a statistically valid correlation between outcome of treatment and scores on sub-tests measuring obsessionality, depression and the somatic concomitants of anxiety.

Sparup has reported experience with 108 chronic back patients in a rehabilitation clinic geared to identify psychosocial problems. Forty-seven percent of them had a psychiatric diagnosis and with appropriate diagnosis and treatment, 70 percent were able to return to work.[10]

In a comprehensive study of industrial injuries of the back and legs, Beals and Hickman concluded that "psychopathological factors play an important and determinate role in the return to work of industrially injured workers" and that these factors were of greater importance in the back-injured than in the leg-injured patient. After studying 180 such patients they suggested the routine employment of psychological evaluations in both industrial and non-industrial back pain syndromes of a chronic nature.[11]

In a recent report Sternbach and others identified a number of psychodynamic factors associated with chronic low back pain.[12] Once more the importance of depression was emphasized as well as certain other characteristics such as

the tendency to invalidism, feelings of helplessness and hopelessness, and the participation by many of these patients in a process described by Szasz as "painmanship."[13]

These are only a sample of many studies which have been done elucidating the relationship between low back pain and psychodynamic factors. It is no longer a question of whether or not such a relationship exists but rather how we can learn more about its basic nature and sharpen our diagnostic and therapeutic acumen.

Patterns of Psychogenic Backache

Our interest in this problem was stimulated by contact with a large number of patients with chronic pain syndromes referred to the Institute of Rehabilitation Medicine as a kind of "court of last resort." These patients had had symptoms persisting for months or years. Most of them had been to many physicians and had tried many forms of therapy with no relief. Invariably, they had been provided with one or more "somatic" diagnoses, such as arthritis or lumbosacral sprain; to which they held tenaciously. Frequently the pain was located in an area which at some time in the past had been the locus of injury or pathology, usually minor. Patients were often tense, nervous individuals, frequently depressed, unable to carry on their usual daily activities and sometimes in a state of almost complete disability. Characteristically, there was little or no evidence of musculoskeletal, radiologic or chemical abnormality at the time of examination.

A review of our records for the calendar year 1973 reveals that 193 patients with musculoskeletal pain syndromes were seen during the 12 month period. Of these, 101 had low back pain as the major complaint. Thirty were diagnosed as having primarily somatic pain, that is, due to degenerative disc disease or other musculoskeletal derangements. Twenty-seven were diagnosed as manifesting "conversion" phenomena, 42 had back pain which appeared to be due to tension and two were thought to be having psychotic pain delusions.

Table I summarizes some data on the 69 psychogenic patients. (The patients with somatic delusions are not included.) These patients suggested a number of situations, often overlapping, in which pain represented something other than a response to a noxious peripheral stimulus, such as trauma, arthritis or disc disease. In the group with somatic pain, there were those whose reactions to pain from a legitimate peripheral stimulus was excessive. This class of patients would be readily recognized and acknowledged by most practicing physicians and the phenomenon would be described as "psychogenic overlay."

The second group was composed of patients in whom pain represented a "conversion" phenomenon. That is, with little or no peripheral pathology, there was a pattern of pain which appeared to represent a substitution for some strong but undesirable emotion, sometimes but not always stemming from an intrapsychic conflict. Among these were patients with severe anxiety who felt less anxious when experiencing pain; others had feelings of anger or resentment which they dared not express; perhaps the largest group were those with varying degrees of depression.

TABLE I

Data on 69 Patients with Psychogenic Backache

	Conversion		Tension	
	Male	Female	Male	Female
Number	6	21	18	24
Average age	34	42	41	49
Average number of months since onset	35	81	63	74

In the third group were those who might be described in today's argot as "uptight." They are the tense, nervous individuals, who react to acute or chronic stress with extreme muscle tension and who have back pain as a result. In discussing the subject of "fibrositis," Kraft and others noted that some patients reacted to stress as though their muscles were their "shock organs."[14]

Finally, there was an occasional psychotic patient in whom back pain (among many other types of pain) was part of a delusional system. Though much less common, this process has been well described.

Approach to the Patient with Back Pain

This brings us to the role of the family physician in this important problem of back pain. He is in a unique position since he is often the first to see the patient. He knows the patient intimately, knows his family setting and background, his past medical history, his strengths and weaknesses.

In the majority of cases of acute back pain, the first examination should rule out the presence of serious visceral problems such as ureteral colic, intra-abdominal disorders or prostatic pathology. An acutely herniated disc presents a distinct picture with most attention focused on one or both legs with pain, hypesthesia, reflex and/or motor changes. Assuming no visceral pathology, the initial treatment of choice for all backache is bed rest, analgesics, sedatives and reassurance. Under no circumstance should the patient be told a diagnosis unless it is clear and unequivocal. The first step toward producing a back invalid is often taken during these early moments. The severity of the patient's pain, the fear of drastic consequences fortified by an incorrect somatic diagnosis often create the fertile soil for a chronic disorder. Whether the pain is the result of a herniation of disc material or strain or sprain of lumbar muscles or ligaments, bed rest is the treatment of choice in the early stages. If the problem is clearly a disc, bed rest should be prolonged and if necessary the patient hospitalized to enforce strict immobilization. The decision to do more elaborate diagnostic studies such as electromyography or myelography should be made in consultation with a neurologist.

The patient with a non-disc problem can experiment with moving around and when his pain has lessened a simple physical therapy program consisting of moist hot packs and trunk strengthening exercises should be started. In our experience, both the abdominal and back muscles should be exercised. Regardless of the suspected diagnosis (i.e., disc or non-disc), X-rays of the lumbar spine should be secured and basic blood work done.

Now what of the patient with a pain syndrome suggesting a psychogenic etiology? What leads one to suspect this diagnosis and how can it be established?

Perhaps the most striking feature in the majority of cases is chronicity. In the 69 patients with psychogenic pain syndromes noted in Table I, the average duration of symptomatology in the various groups ranged from 35 to 81 months. The persistence of symptoms for long periods, despite multiple diagnostic and therapeutic efforts, is suggestive of a psychogenic etiology.

Multiple diagnostic and therapeutic efforts are suggestive. The patient who has seen eight doctors in two years is typical. In our experience, the minimum is three or four, the maximum, 15, 20 or more.

The quality, location and pattern of "conversion" pain are often bizarre. The patient frequently is unable to describe the *quality* of the pain and when pressed resorts to describing its *intensity*, with such words as "awful," "unbearable," "terrible," "killing." He often states that he can't stand it any longer and a moment later, when his attention is diverted from the subject, is able to chat amiably, joke and laugh. The pain often does not correspond to any anatomical or neurological pattern that is familiar. This is in striking contrast to patients with bona fide degenerative disc disease or even those with pain due to excessive muscle tension. In the latter, though the perpetuating driving force is psychogenic, the location and quality of the pain are logical. It is surprising how often physicians will accept the patient's description of his pain without questioning sharply for those details which can help to distinguish between a somatic or psychogenic etiology. At the same time, one must guard against the opposite possibility — that the pain pattern will be anatomically logical but "conversion" in nature nevertheless.

One of the most confusing aspects of the "conversion" cases is the fact that there is often a history of previous injury at the pain site.[1,15] It is as if the psyche had selected the site because of a previous experience of pain in that area. It may be that there is a pain memory trace somewhere in the brain which is re-activated under the influence of a pathopsychological state. It confuses both patient and doctor and tends to fortify the idea of a somatic explanation for the pain. With brief reflection, it should be clear that the mildness of the trauma and the absence of objective clinical or laboratory evidence of pathology cannot support a somatic diagnosis. And yet so respectable is the status of the organic diagnosis, so disreputable and unacceptable a psychogenic one, that the diagnostician feels no compulsion to support his diagnosis logically. He is content that the patient says he has pain since he is sure that all pain must have a peripheral cause. The absence of sophistication in these matters has created a remarkable situation in the practice of medicine whereby a substantial proportion of patients with pain syndromes may go unrecognized and improperly diagnosed. Worse, there is reason to believe that improper management of these patients serves to intensify the problem. We have seen a few in whom we were tempted to use the term "iatrogenic chronic back disorder."

To recapitulate, the diagnosis of a psychogenic pain disorder of the muscle tension or "conversion" type should be suspected if there is a long history, if the patient has seen a multiplicity of physicians, has had many X-rays, laboratory tests and treatment attempts, if the pattern, location and quality of pain do not conform to recognized clinical states, and finally if there is evidence of a psychic state which is productive of the pain. Tense, nervous, dynamic, driving individuals are prone to back or neck pain syndromes. These are often due to muscle tension and the patient is willing to accept this diagnosis since it is acceptable in our culture to have physical pathology as a result of a driving, dynamic personality. It is almost looked upon as a virtue.

"Conversion" pain, as previously noted, always has a more subtle psychological background, sometimes quite obvious and sometimes obscure. It is not respectable, as are somatic or muscle tension pain, and is often looked upon as a sign of weakness or, worse, mental illness. The patient is reluctant to discuss his personal affairs or his feelings and resents the implication that these may have something to do with his pain.

We have attempted to circumvent this difficulty by adopting the clinical tactic of attributing "conversion" pain to "spasm," which is acceptable to the patient. It is suggested that the turmoil of his psychic state, the anxiety, the depression, the anger or resentment, produce "spasm" which is painful. When the patient is able to see the relationship between his emotional life and his pain, and most are able to accept this when put in that context, improvement usually begins.

This insight approach is always combined with a physical therapy program. The latter serves many purposes. It gives the patient a face-saving way out; it serves to improve his muscle tone and strength, and in those patients with muscle tension pain it can contribute to muscle relaxation. The value of the psychological way out should not be underestimated. The revelations to the doctor need not be discussed with the outside world. The patient is under treatment for "spasm."

Table II summarizes the results of our treatment regimen in the 63 patients who requested therapy. Patients with "conversion" pain did not do as well as those with a diagnosis of tension. This is logical since pain in the "conversion" group represented a more complicated and perhaps deep-seated psychological problem and physical therapy could not be expected to bring about any change in tissues where there was not local pathology in the first place. On the other hand, patients with muscles in spasm due to tension had nothing to lose by acknowledging the role of tension in the production of the pain and could profit a great deal from the various physical therapeutic measures applied to their muscles.

TABLE II

Response to Therapy in 69 Patients With Psychogenic Backache

	Conversion Pain		Tension Pain	
	Male	Female	Male	Female
Excellent	1	3	8	10
Good	1	5	3	8
Fair	2	7	4	4
Failure	1	4	1	1
Not treated	1	2	2	1
TOTAL	6	21	18	24

Discussion

Among many phenomena observed in our clinic and described in Sargent's report, where the frequency with which patients attributed their symptoms to some previous injury though the evidence for musculoskeletal pathology was lacking are: the fact that symptoms tended to become fixed if attention was paid to them (somatic diagnoses become similarly fixed); the similarity in symptoms of patients with organic disease resulting in restriction of trunk mobility, for example, straight leg raising, and patients with severe muscle tension. What is suggested by Sargent's work is that people who are under stress, who are suffering anxiety and/or depression, may react with symptoms which can be attributed to a type of "conversion" reaction or to severe muscle tension.

It is no secret that millions of American civilians live in a great variety of stressful situations and the dynamics at work in the Air Force soldiers were not very different from those of people in civilian life except for the factor of time. A woman who lives with an alcoholic husband may not become tense, anxious and nervous in three months but she may well do so in three years. But one does not require as dramatic a situation as that. The manner in which someone responds to the everyday stresses and strains of life is a function of his personality. The consumption of alcohol and tranquilizers in our society attests to the fact that millions of us have difficulty coping with the everyday facts of life. And it has been our observation that many people who are making a borderline adjustment to life may be precipitated into a form of emotional decompensation, as it were, by a relatively minor musculoskeletal derangement, a strain or sprain of back muscles, or a stressed ligament, and continue to have symptoms long after the acute process has subsided. These patients are often assisted in this malignant process by overly vigorous treatment, a fixation on the somatic component, the development of fear and apprehension about the consequences of becoming a "back cripple," all of which tend to perpetuate and intensify the symptomatology.

Another study similar to Sargent's but perhaps more germane because it described a series of patients in civilian life, was the report of Walters which appeared in *Brain* in 1961.[15] He reviewed 430 cases seen over a period of 11 years who had what he called psychogenic regional pain, his term for what has been designated hysterical pain. It is of interest that this author believed that there were three ways whereby psychological factors could produce pain: by magnifying somatic pain, through the production of excessive muscle tension and via the process of conversion. Though not restricted to low back pain, many of his patients suffered from backache.

Note that this is the same diagnostic breakdown described by Sargent and the same grouping observed in our patient population with psychogenic pain. It is the third group, those with "conversion" pain, which was the subject of Walters' paper. He substituted the term psychogenic regional pain for conversion hysterical pain since he observed, correctly, that not all patients with "conversion" pain were typically "hysterical." That is, they did not all manifest the usual blasé, calm attitude described by the French as belle indifference. We would agree with this but believe the term *conversion pain* is still preferable since it suggests conversion of a psychic to a somatic symptom.

Our experience reveals a modest degree of success with these patients. Our conclusions, both with respect to diagnosis and treatment, are tentative, but should be helpful to family physicians who deal with these problems frequently in everyday practice.

References

1. Sargent M. Psychosomatic backache. *N Eng J Med 234*:427, 1946.
2. Grinker RR, Spiegel JP. Men Under Stress. New York, Blakiston, 1945.
3. Study of back pain. Ediotrial in *Br Med J* 4:4, 1971.
4. Adams RD. The anatomy of chronic back pain. *Chron Dis Manag 7*: 1973.
5. Szasz TS. Pain and Pleasure: A Study of Bodily Feelings. New York, Basic Books, Inc., 1957.
6. Engel GL. Psychogenic pain. *J Occup Med 3*:249, 1961.
7. Engel GL. "Psychogenic" pain and the pain-prone patient. *Am J Med 26*:899, 1959.
8. Grinker RR, Robbins FP. Psychosomatic Case Book. New York, Blakiston, 1954.
9. Wolkind SN, Forrest AJ. Low back pain: a psychiatric investigation. *Postgrad Med J 48*:76, 1972.
10. Sparup KH. A sociomedical evaluation of back insufficiency. *Scand J Rehab Med 1*:74, 1969.
11. Beals RK, Hickman NW. Industrial injuries of the back and extremities. *J Bone Joint Surg 54A*: 1972.
12. Sternbach RA, Wolf SR, Murphy RW, Akeson WH. Aspects of chronic low back pain. *Psychosomatics 14*:52, 1973.
13. Szasz TS. The psychology of persistent pain: a portrait of l'homme douloureux. In Soulairac A, Cahn J, Charpentier J (eds.). Pain. New York, Academic Press, 1968.
14. Kraft GH, Johnson EW, LaBan MM. The fibrositis syndrome. *Arch Phys Med Rehab 49*:155, 1968.
15. Walters A. Psychogenic regional pain alias hysterical pain. *Brain 84*:1, 1961.