ORIGINAL COMMUNICATIONS

The clenched fist syndrome

The clenched fist syndrome is an entity in which the patient keeps one or both hands tightly clenched. It is seen in all age groups; hand dominance or compensation is not a factor. It usually follows a minor inciting incident and is associated with swelling, pain, and paradoxical stiffness. No organic disease can be found and extension of the fingers is always possible under anesthesia. Psychiatrically the patient is classified as having severe anger and poor defenses. The prognosis is poor.

Barry P. Simmons, M.D., *and* Russell G. Vasile, M.D., *Boston, Mass.*

The hand, because of its role in almost everything we do, is a logical somatic outlet for psychological disorders. Certainly, "writer's cramp" is a well-known entity.[1] In analyzing a large series of patients having an "occupational cramp" (a broader phrase including not only writer's cramp, violinist's cramp, and trumpeter's lip) Moldofsky noted this functional motor disorder is often associated with unexpressed or denied anger. Further reports have more specifically enumerated the physical presentations of these psychologically motivated problems, including factitious lymphedema of the hand,[2] the S-H-A-F-T syndrome,[3] the syndrome of delicate self-cutting.[4] To this array we would like to add a previously undescribed conversion phenomenon: the clenched fist syndrome. Hopefully, with the use of case reports, we will be able to elucidate specific factors integral to making this diagnosis.

Case reports

Case 1. S.L., a 30-year-old right-handed white man, was referred for evaluation and treatment of recurrent swelling in his right hand and forearm. Ten months before he had experienced massive swelling of the dorsum of the hand and forearm; as this episode had followed a paronychia some 2 weeks earlier, the patient had been placed on intravenous antibiotics with the extremity elevated. After 1 month of therapy the swelling cleared.

Two days after discharge, the swelling recurred so markedly that fasciotomies were performed in the forearm, followed by a 6-week course of antibiotics and elevation of the extremity. Again the symptoms resolved. A venogram and lymphangiogram were obtained before operation and both studies were normal. (The "broken window pane" appearance described by Smith was absent.) At that time, to help decrease the swelling, an Ace bandage was put over the hand holding it in a fistlike position. The patient liberated the thumb and index fingers to facilitate smoking. This was the first time the patient or physician took note of a clenched fist. Shortly after discharge his swelling recurred and he was rehospitalized and given prednisone in doses as high as 200 mg daily. Again swelling disappeared, only to recur after discharge, prompting referral.

On physical examination of the right upper extremity, positive findings were confined to the hand and wrist. There was a brawny, nonpitting fullness on the dorsum of the hand with some increased pigmentation (Fig. 1). There was full active motion of the thumb and index fingers, but the ulnar three digits were tucked firmly into his palm. There was a foul odor from the macerated palm and the interdigital skin. Attempted extension produced pain. Wrist motion, paradoxically, was limited in dorsiflexion with only 10° of volar flexion and 30° of dorsiflexion possible; changing the position of the wrist did not alter the extension of the fingers.

Upon rehospitalization, the extremity was again elevated resulting in resolution of the swelling. No medications were used. A cast was applied to maintain the slightly increased extension of the fingers permitted by the reduction of lymphedema. Three serial casts weekly were applied, gaining about 10° of extension at each joint with each application, but finally discontinued due to complaints of pain.

At this point the patient was given a regional block which allowed full range of motion of his wrist, full extension of his metacarpophalangeal joints, and extension of the proximal interphalangeal joints to −30° in the middle and ring fingers and to −50° in the little finger (Fig. 2). A cast was applied in this position but again could not be tolerated and, when removed, his ulnar three fingers again fell into full flexion. His swelling did not recur.

Neurological evaluation, obtained after full extension of the extremity under regional anesthesia, including an electromyogram and nerve conduction study, was normal. More striking, however, was observation of voluntary activity in the finger flexor muscles while passive finger extension was attempted.

From the Departments of Orthopaedic Surgery, Harvard Medical School and Peter Bent Brigham Hospital and Children's Hospital Medical Center, and the Department of Psychiatry, Harvard Medical School and Massachusetts Mental Health Center, Boston, Mass.

Received for publication Aug. 3, 1979.

Reprint requests: Barry P. Simmons, M.D., Peter Bent Brigham Hospital, 721 Huntington Ave., Boston, MA 02115 [(617) 734-8860].

0363-5023/80/050420+08$00.80/0

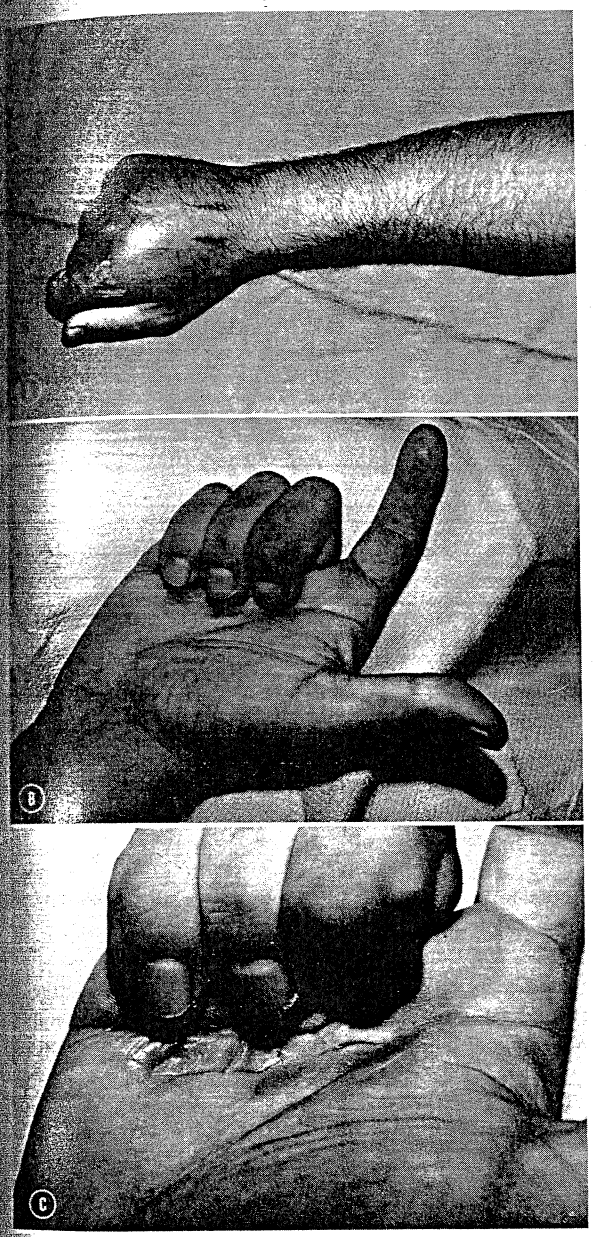

Fig. 1. A, brawny, nonpitting edema on the dorsum of the hand (scars were from lymphangiogram). **B,** The ulnar three digits were tightly clenched with a free index and thumb. **C,** A macerated palm.

Psychiatric assessment was obtained concurrently with the neurological evaluation. The patient was affable during his initial psychiatric interview, speaking at length about his illness with a striking lack of manifest anxiety or depression concerning his disability.

There was no evidence of psychosis. His psychiatric history was unremarkable; the patient had no history of overt emotional disturbance, nor were there any data to suggest previous psychosomatic conversion reactions. Recent history in the year prior to the onset of illness revealed a period of marital discord leading to divorce and subsequent remarriage. Otherwise, the family history was noteworthy for the untimely death of the patient's father several years before. His vocational history was characterized by a pattern of exceedingly long hours on the job—up to 16 hours daily, over a period of years, with the disability causing loss of the patient's position as a salesman. (Disability compensation was not an issue.) A significant finding from the evaluation was the patient's inability to acknowledge affects of sadness and anger concerning his family losses, marital disappointments, and physical disability.

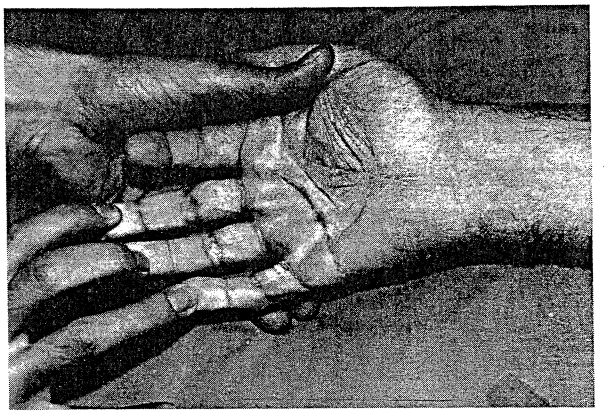

Fig. 2. Extension under axillary-block anesthesia.

Psychological tests administered included the Minnesota Multiphasic Personality Inventory (MMPI) and Rorschach tests. The former did not reveal a response pattern consistent with that expected from individuals who exhibit conversion phenomena; the latter, a projective test, was noteworthy in that the patient perceived the inkblots in an unusual fashion. There was a marked paucity of human figures described and a striking lack of elaboration of the themes usually "read into" the cards. Strong aggressive impulses were manifested by the patient who perceived biting mouths on several occasions. The test also revealed that hands were perceived as praying or clapping in an inkblot in which that reaction was most uncommon, "suggesting a symbolic link between symptoms and affects," according to the psychologist. The examiner observed that repression was relied upon heavily as the chief and only defense revealed through the Rorschach, its chief manifestation being the extreme lack of emotional depth transmitted by the patient's interpretations of the cards.

A twofold treatment plan was adopted: (1) supportive psychotherapy and (2) a biofeedback program. It was thought that some value might be obtained from making the patient aware of the voluntary nature of his finger flexor contractions by utilizing a biofeedback device that would give him an audible sound if there was electrical activity in the muscle; thus the patient could extinguish the sound by relaxing the flexors as extension was attempted.

Over the next month the patient was seen weekly for psychotherapy sessions and three to four times weekly for the biofeedback program. A noxious biofeedback device was employed, attached to the patient's arm. The patient found it

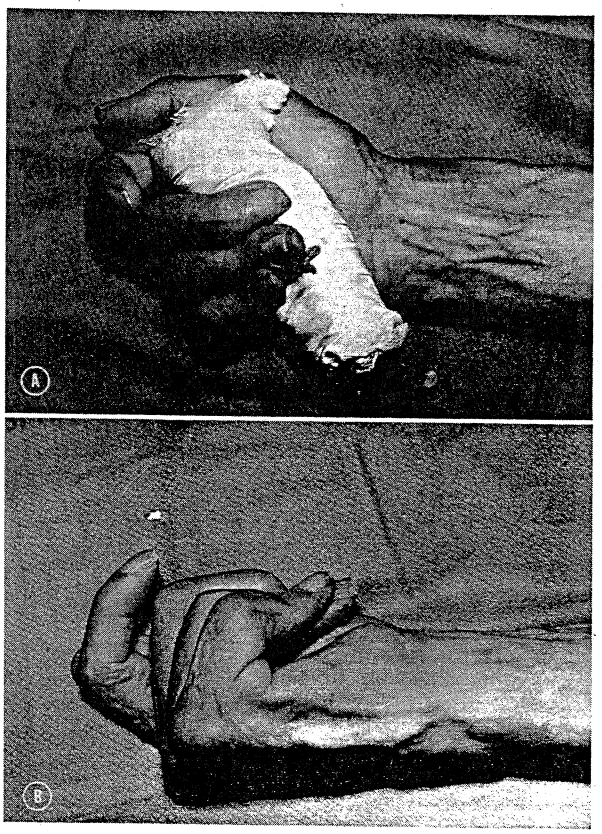

Fig. 3. A and **B,** Clenched fist mainly involving ulnar three digits; banadge had been used to help prevent maceration.

easier to relax his flexors than to extend his extensor muscles of the hand. By utilizing this method the patient was able to open his clenched fist painlessly a full 2 inches after 3 weeks of using the machine.

At the point of making maximal progress, the patient began to miss appointments repeatedly both for psychotherapy and for the use of the biofeedback machine. When approached sympathetically about his behavior, the patient protested bitterly that the machine was his only hope for progress (devaluing psychotherapy as useless), and vowed more consistent compliance with its use. After that episode the patient missed several more appointments, completely terminated all treatment, and was lost to follow-up, despite appeals to continue treatment. His hand remained clenched. Months later the patient returned, his hand still held in a fist, requesting an operative procedure to provide extension of his fingers.

Case 2. D.B., a 28-year-old white man, had a 3½ year history of inability to open both hands from a clenched fist position. The diagnosis at that time was conversion reaction, and the admission was arranged to exclude an organic cause for the clenched fists.

His disability had started 12 months earlier when he first noted the gradual onset of difficulty in moving the thumbs of both hands. Two months later he was unable to open either hand, although he remained able to move his thumbs, and noted that his hands were swollen. Subsequently he stopped working when he first noted that his hands were swollen. No organic basis for the clenched fists could be found. Attempts to straighten his hands with the use of splints produced extreme pain, and within days their use was aborted due to a psychotic episode. The psychosis promptly cleared and his hands were allowed to return to the clenched position. For months prior to admission his hands were able to be opened under regional anesthesia. Indocin, phenylbutazone, prednisone, and colbenemid all had failed to relieve his pain.

Physical exam revealed a musculoskeletal exam that was unremarkable, "save for the patient's inability to open either hand," in spite of vigorous efforts of the examiner to open them. There was also marked limitation of extension at the wrists. He was neurologically intact. During the hospital course the patient's hands were noted to be open on separate occasions at night.

A psychiatric consultation was requested, revealing that the patient had never known his father, and was raised by his mother and stepfather, toward whom he had an exceedingly hostile relationship. While in military service the patient had obtained a service connected disability for an "anxiety reaction," his main symptom being vomiting, which was viewed as psychological. Upon discharge from the service, a pattern of violence associated with alchoholic intoxication emerged, resulting in serious assaults on his stepfather, not remembered by the patient when sober. These assaults included pushing his stepfather down a flight of stairs and attacking him with a knife. On interview the patient noted that he still felt like "doing a number on his stepfather," but did not see how it would be possible to "kill a man without the use of my hands."

The psychiatric history, together with the absence of any organic explanation for his clenched fists, led to confirmation of the admitting diagnosis of conversion reaction. The hands have remained clenched.

Case 3. J.F., a 70-year-old white man who was chronically institutionalized for aphasic chronic schizophrenic, had an incomplete history. He was referred for surgery on his right hand for hygienic purposes. This hand had been clenched for 50 years (Fig. 3). Examination was virtually impossible with the patient awake in that he was combative. While he was asleep, it was possible to extend his fingers enough to open his palm (Fig. 4), despite the fact that he had an essentially clenched his fist for 50 years. He underwent complete release of his finger flexors and his intrinsics, and when he awoke, finding his hand in an extended position, he became combative. He required psychotropic medications for 3 days, at which time he adapted to the new position.

Case 4. A.B., a 14½-year-old right-handed boy, had been well until 10 months prior to admission, at which time he complained of pain and immobility of the left hand. This occurred 2 weeks after the beginning of the basketball season (and his demotion to "second team"), and a presumptive diagnosis of traumatic soft-tissue injury to his left hand was advised to discontinue baseball and aspirin (600 mg four a day) and hot soaks were prescribed. Two weeks later the

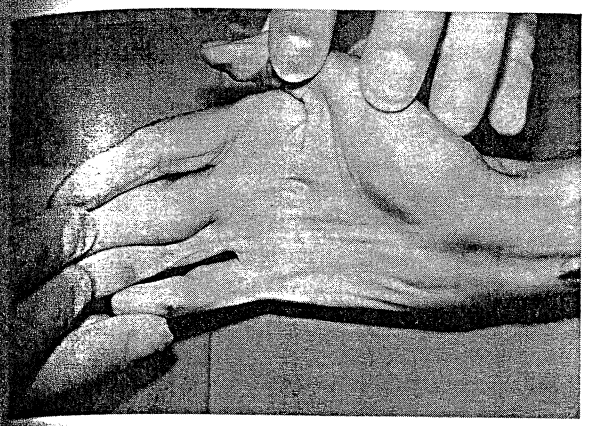

Fig. 4. Extension under general anesthesia, despite multiple years of a clenched fist. Note the splitting of the skin over the ring finger's proximal interphalangeal joint.

boy could no longer open his hand, holding it in a clenched fashion with persistent flexion at the wrist and elbow. On admission, physical examination was unremarkable, except for mild contractures and swelling of the left wrist and hand. Normal investigations included hand and wrist x-rays, electromyograms, and nerve conduction studies. Physical and hydrotherapy were prescribed, and function returned to the hand after 4 days of hospitalization, with full range of motion of the left hand, wrist, and elbow, although between treatments the boy continued to hold his wrist in a flexed, clenched position. Upon discharge the patient failed to comply with his physical therapy program and became withdrawn, brooding in his room at home for hours. His parents, after years of marital discord, separated, with the patient and his younger brother remaining with the mother. The boy refused to attend summer camp or school, pain and immobility of the left hand recurred, and on examination (3 months after initial hospital discharge) he was noted to have a tightly clenched left hand, flexion contractures of the fingers, wrist, and elbow, and a moderate degree of soft tissue atrophy of the left hand.

On readmission, all of the above diagnostic tests again proved to be normal. Under general anesthesia the flexion and clenching relaxed greatly, and the left arm and hand were immobilized in plaster with the wrist in 20° of dorsiflexion and the fingers in extension. The cast was removed after 3 weeks, and physical therapy was again prescribed, but outpatient compliance was sporadic and, in 1 month, the boy, who had not attended school since the fall, was reexamined and found to have reacquired the flexion deformities. There was a 2+ pitting edema over the dorsum of the left hand and wrist, with considerable soft-tissue atrophy of the left hand. The hand was in a tightly clenched position, was colder than the right extremity, and was reported to be painful by the patient upon inquiry, although he denied anything seriously wrong with his hand or his unwillingness to go to school. Again he was given an anesthetic and immobilized in a corrected position. After 3 weeks the cast was removed, but the boy again

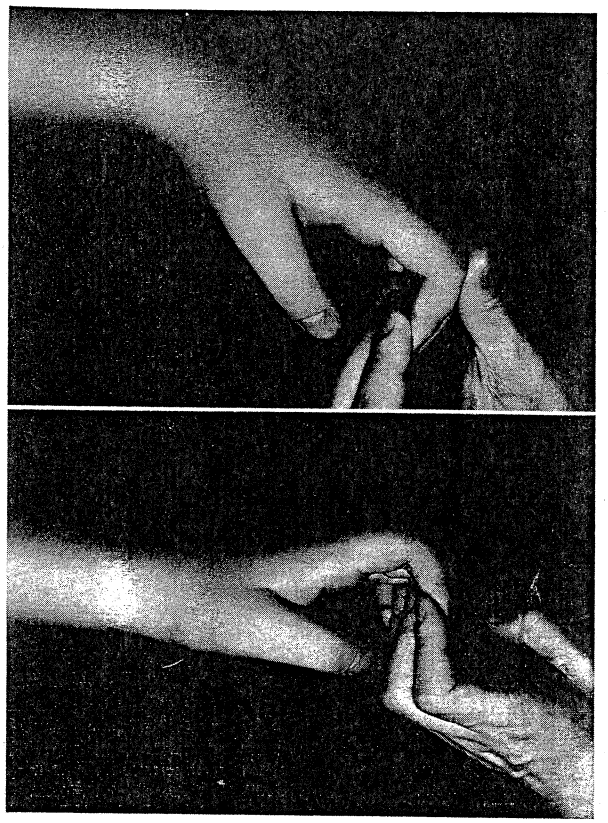

Fig. 5. A and **B,** Finger flexion is unchanged by wrist motion (paradoxical stiffness).

refused physical therapy, and, at one point literally fleeing from the hospital's physical therapy department, pursued by his father, the patient walked 5 miles to his mother's home. After this episode he was referred to our psychosomatic unit for evaluation and treatment.

Physical examination again proved to be unremarkable, except for findings confined to the left hand. Neurological assessment revealed coldness, decreased responses to pain, touch, vibration, sense, and object identification. Electromyographic and nerve conduction studies again proved to be normal. Examination again revealed a tightly clenched left hand with the associated findings alluded to above. Psychological evaluation of the patient uncovered new findings: sleep disturbance, with initial insomnia of 1 to 2 hours, and early awakening, appetite disturbance with a recent 10 pound weight loss, and expression of feelings of helplessness, lack of enjoyment of life, and paranoid fears of being attacked by doctors whom he felt were "out to take away my father." On psychological testing, he exhibited normal intelligence, but on projective tests he was found to be depressed and angry, suspicious of male figures. (He was uncooperative with testing, initially refusing to participate.) A sodium amytal interview was arranged, and during the interview the boy was able to relax his hand to a significant degree, suggesting that the clenching and flexion deformities were still reversible. At the

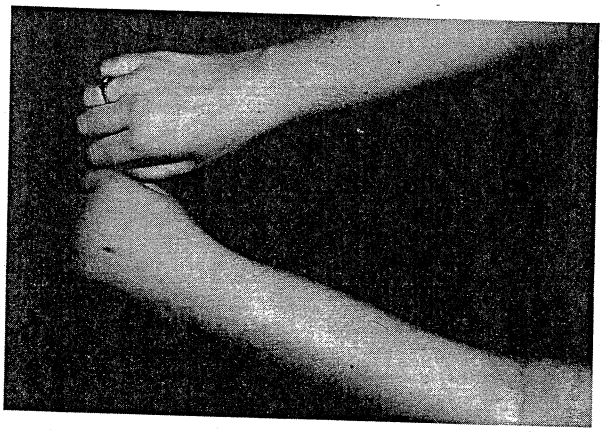

Fig. 6. Suspected factitious lymphedema; note the demarcation point on the left forearm at the juncture of proximal third and the distal two-thirds.

Fig. 7. Flail hand and wrist occurring after an anger-filled/hostile session with the family and psychiatrist.

same time, during amytal hypnosis, he talked of his wish to kill his father. (By this time father was living with another woman.)

Treatments undertaken included a vigorous physical therapy program using behavioral rewards and contingencies to reinforce the use of his left hand, individual and family psychotherapy to facilitate discussion of latent feelings of grief and resentment over the parental separation, and tricyclic antidepressant medication (Imipramine, 125 mg, orally, qhs) Upon discharge 4 months after admission, and 1 year after the onset of the illness, he had a full range of motion. There was no swelling or autonomic changes in the hand. Concurrent with the improvement in his hand was a marked improvement in mood, school performance, and peer relationships. This improvement in the psychological status of the patient occurred gradually over the months of hospitalization; antidepressants were discontinued after 7 weeks of hospitalization, but individual psychotherapy has continued. In the year since his discharge, he continues to do well, despite the finalization of his parent's divorce.

Case 5. D.C., a 14½-year-old right-handed white girl, was referred for diagnosis and treatment of a swollen left hand, wrist, and forearm and flexion contractures of the fingers of the left hand. Six months prior to admission, the patient struck her left wrist while trying to pick up a ruler at school. A cast was applied although a fracture was never documented radiographically. Repeat x-rays 1 month later showed no new bone formation. However, at this point, the patient was unable to use her hand, which was now held in a clenched position. A presumptive diagnosis of reflex sympathetic dystrophy was made and three brachial plexus blocks were administered, yielding no sustained improvement, but producing an important clinical observation: relaxation of the clenched fist after insertion of the needle but before injection of anesthetic, a "placebo response" consistent with a functional disorder. The patient's continued resistance to using her left hand and arm, along with evidence of intact strength, circulation, and innervation prompted referral.

On presentation the patient was a pubescent female in no distress. Positive findings on physical examination were confined to the left upper extremity, the left hand being clenched and the wrist flexed. There was swelling of the wrist and distal forearm, moist palms with a slight odor, sensation diminished globally to the level of the mid brachium. Attempted finger extension was painful, and changing the position of the wrist did not alter the finger flexion (paradoxical stiffness) (Fig. 5). On subsequent visits the degree of swelling was variable; on one occasion, however, there was a demarcation line at the midforearm, suggesting factitious lymphedema (Fig. 6). Laboratory tests, including complete blood count, sedimentation rate, LE prep, antinuclear antibody, rheumatoid factor, were within normal limits. Electromyography and nerve conduction tests were normal.

Psychiatric evaluation and psychological testing disclosed that the patient uses extremely rigid mechanisms of avoidance and denial as defenses against expressions of impulses. Also documented was a delay in perceptual-motor development 2½ years behind chronological expectation. She was found to be depressed, with an obsessive-compulsive character structure.

The patient's relationship with her psychiatric evaluator was found to be hostile and ambivalent from the start, with frequent refusals to engage in meetings, and a flat rejection that emotional factors could be contributing to her disability. The patient often initiated confrontation around the etiology of her disorder. Her mental status examination was characterized by a neat, appropriate, somewhat stern young woman of above-average intelligence. Her speech was entirely normal; affect was characterized by angry, sullen emotions which were expressed in passive ways. Although capable of a broad range of emotional expression, she was seldom spontaneous in her affective manner. There was no evidence of formal thought disorder or psychosis.

The psychiatric evaluation included family diagnostic sessions, which indicated recent family stresses and a pattern of family relationships characterized by heavy reliance on the patient being contained in the expression of affects and expected to perform at a high level academically. Following one

Table I

	Clenched fist syndrome	*Reflex sympathetic dystrophy*
Minor inciting incident	+	+
Clenched fist	+	–
Macerated, foul-smelling palm	+	–
Paradoxical stiffness	+	–
Swelling	+	+
Demarcation line	±	–
Pain with passive extension	+	+
Pain with passive flexion	–	+
Demineralization on x-ray	–	+
Electomyogram nerve conduction studies	–	–
Electomyogram of finger flexors with passive finger extension	+	?
Examination under anesthesia	Often full range of motion may have some limited interphalangeal extension	Limited range of motion in flexion and extension all joints
Psychological testing	Anger, poor defenses	Varied
Prognosis	Poor	Fair

of these interviews, which was, quite emotional, the picture changed over the subsequent week to a *flail* hand and wrist (Fig. 7).

Treatment included serial casts while the fist was clenched, extensive physical therapy, individual psychotherapy, group psychotherapy, ward milieu therapy, and family counseling.

At the time of discharge, there was distinct improvement in the mobility of her wrist. Efforts to involve the patient in outpatient psychotherapy failed, but the patient did come faithfully to physical therapy sessions. Three months after discharge, she continued to have full activity in all motor groups of the hand, although somewhat weaker than normal. She has continued to maintain full function of the hand, albeit with some atrophy of her thenar and hypothenar muscle groups, but she has intermittent weakness varying with her emotional status.

Discussion

These cases serve to describe a previously unreported conversion phenomenon: "the clenched fist syndrome." It also underlines the multidisciplinary approach to the diagnosis and treatment of this conversion phenomenon requiring the input of the hand surgeon, neurologist, and psychiatrist. Characteristically, the history on all of these patients is that of some inciting episode, usually trauma, although often the trauma is of a rather benign nature. The patient usually presents to the physician for evaluation of swelling due to trauma and often no note of a clenched fist is made at that initial visit. Subsequently, during the course of treatment, the patient is noted to have a clenched fist. The swelling usually persists. On examination, the fingers are usually noted to be tightly held within the palm, and the wrist is also held in a flexed position, although on occasion it may be held in extension. Attempted extension of the fingers results in pain, although the finger flexors can be felt to be contracting at the time that passive extension is attempted. There is a "paradoxical stiffness" in that the patient maintains the same degree of finger flexion, despite changing the position of the wrist. If the contracture has been longstanding, then there is often interdigital maceration with a malodorous aroma arising from the palm, and occasionally a history of secondary infections as a result of the position. The elbow is often kept flexed as well.

Sensibility may vary, occasionally being globally diminished, but usually being normal. All of the motor units are usually found to be intact. Swelling is always present and on occasion there is a sharp level of demarcation, consistent with factitious lymphedema as a result of the use of a tourniquet. There is no correlation with the dominant or nondominant hand. There is no correlation with work-related injuries and disability claims. There is no correlation with dominance.

Laboratory tests are normal, as are an EMG and nerve conduction study. Examination under anesthesia seems to be the major diagnostic tool in that, as soon as the anesthetic is administered, the hand easily falls into extension to a varying degree, depending on the length of time of the contracture. Obviously, some secondary changes may have occurred. The use of serial plasters usually fails, as did biofeedback on one of the patients. Once all of these tests have been performed, then the diagnosis becomes evident. The differential diagnosis

would include a reflex sympathetic dystrophy and/or myotonia. However, there are several factors which are inconsistent with either myotonia or reflex sympathetic dystrophy. There are no diffuse trophic changes of the skin. As well, in reflex sympathetic dystrophies the contractures are in a more extended position. Also, reflex sympathetic dystrophies will usually show signs of demineralization on the roentgenograms. Diagnostic features of the two disorders are compared in Table I. A useful test is to do an electromyogram (EMG) on the finger flexors while the fingers are being passively extended; voluntary patterns are noted when this maneuver is peformed. In myotonia, usually EMG changes are present.

Once the diagnosis is made, psychological and psychiatric evaluation is necessary. The evaluation of these cases highlighted a number of issues, including the diversity of psychopathological presentations associated with conversion reactions. Rangell's[5] observation that the association of "conversion" with "hysteria . . . has long since outlived its usefulness and even longer its accuracy" was borne out in the cases presented, in that none of them had a premorbid hysterical personality and none of those psychologically tested revealed a characteristic hysterical testing profile. Underlining the concept that conversion processes may be a manifestation of many different psychiatric disorders, Zeigler and Imboden[6] reported a series of 134 conversion reaction patients seen at the Johns Hopkins Hospital over a 4-year period; 40 patients exhibited depression, 19 schizophrenia, and the remainder had neurotic or character disorders. Conversion phenomena and histrionic personality traits were not correlated. The avoidance of painful affects was seen as a consistent function of the conversion phenomena.

It is critical to note that conversion pehnomena, as Schieffer[7] observes, represents a "form of non-verbal communication, an analysis of which allows for an understanding in depth of the patient's body symbolization." Nonspecific somatic sequelae of psychic tensions and undischarged feelings are not conversion phenomena, for conversion symptomatology at its core reflects the *symbolic* expression of "repressed forbidden wishes throughout the entire gamut of psychopathological symptomatology." How can the clenched fists exhibited by these patients be understood as a symbolic expression of unconscious conflict? A striking feature of the cases presented is the consistent theme of repressed anger, which was evident on clinical examination and psychological testing. The hand bound into a fist symbolically expresses anger, yet keeps it in check by "paralyzing" the dominant hand. Familial conflicts were apparent in all of the cases presented, and hostile feelings seemed to gain expression through hand symptomatology. In one case, when the defense of the clenched fist was removed by treatment, a psychosis resulted, suggesting that the clenched hands "contained" intolerable dangerous feelings.

Indeed, resistance to treatment proved to be an important feature of this syndrome. No patient cooperated with treatment without a considerable degree of ambivalence, and often active refusal to adopt treatment recommendations. The treatment experience reported with patient's suffering from conversion reactions is quite variable. Slater's[8] follow-up study of conversion reactions revealed that 50% retained the symptom at the end of 1 year, 30% at 5 years, and 20% at 15 years.

In a study of seven patients with functional paralysis of the dominant limb with joint contracture and sensory disturbances, five experienced rapid disappearance of symptoms with suggestion persuasion and exercises, but in two patients the symptoms persisted for at least 1 year, showing no indication of subsiding. Factors correlated with a good prognosis included stability in close relationships and work, the capacity to feel and express emotions without developing incapacitating anxiety or depression, and the ability to develop a therapeutic alliance with a physician. It is noteworthy that each of our patients presented varying degrees of difficulty in developing a commitment to treatment.

Our experience in treating these patients suggested the importance of a multimodal therapeutic approach including mechanistic approaches, psychotherapy, and physical therapy. Experience in the treatment of such cases is limited, although Moldofsky[1] has reviewed the subject of the treatment of a syndrome not dissimilar in certain respects to the clenched fist syndrome—the syndrome of occupational cramp, a functional motor disorder in which a specific learned motor skill is impaired; among the several varieties of cramps of the upper extremity that have been specified are writer's cramp, typist's cramp, violinist's cramp. An incidence of one of 1,000 neuropsychiatric cases were reported, and the observation were made that neither purely psychological nor mechanistic approaches (such as cervical traction, galvanic stimulation among others) had borne dramatic results. Moldofsky noted, in describing writer's cramp, "the delicate writing skill was seen to be impaired by the clenched hand, an over-riding concurrent psychogiological posture associated with sustained and often unexpressed or denied anger . . . any situation that evoked unacceptable angry feelings would be associated with the reappearance of writing difficulties." Those patients who made progress "were

able to alter their attitudes toward their contained resentments." Symptom improvement seemed correlated with the patient's capacity to develop a positive relationship with the physician managing the problem.

Summary and conclusions

The material presented above underlines the diagnostic and therapeutic challenge confronting the clinician approaching functional symptomatology, in this case the conversion phenomena of clenched fists. Pertinent to clinical issues, the following points should be stressed: (1) It is imperative that assessment of such cases include hand surgery, neurological, and psychiatric consultation before definitive treatment is initiated. (2) Specialized procedures such as EMG, nerve conduction studies, assessment of response to nerve blocks play a role in the clinical assessment of such patients. In children with this disorder, psychological testing should include testing of cognitive capacity including visual-motor cognitive functioning. (3) Psychological testing, including MMPI and a full battery of projective tests, is also indicated to determine whether repression of powerful affects is operative. (4) Conversion phenomena are not the exclusive domain of the hysterical patient, and an awareness of this fact may prevent overlooking the functional core of a patient's physical complaints. (5) Biofeedback approaches and suggestive techniques, including hypnosis and amytal interviews, warrant further investigation in the assessment and managment of these patients. Also, antidepressant medication such as imipramine appeared to have a beneficial effect on one patient. (6) The physician must invariably provide a "gain" to compensate for the "loss" of the symptom.

This gain should include a consistent, supportive relationship, expressed through a treatment program which may include mechanistic techniques, psychotherapy, and psychopharmacological approaches. (7) Certain patients may need their symptoms to ward off a more profound psychological deterioration; in these cases, the therapeutic program should be geared to acknowledge the reality that the symptom may never be totally relieved, which may reassure the patient that his avenue to a supportive therapeutic relationship will remain undisturbed.

The authors would like to thank Drs. Lewis Millender, Mac Rogers, and Tim Rivinus for allowing us to include their patients in this report; also, Benjamin Murawski, Ph.D.(Psych.), who helped coin the phrase "clenched fist syndrome."

REFERENCES

1. Moldofsky H: Occupational cramp. J Psychosom Res 5:439, 1971
2. Smith RJ: Factitious lymphedema of the hand. J Bone Joint Surg [Am] 57:89, 1975
3. Wallace PF, Fitzmorris CS: The S-H-A-F-T syndrome in the upper extremity. J HAND SURG 3:492, 1978
4. Pao P-N: The syndrome of delicate self-cutting. Br J Med Psychol 42:195, 1969
5. Rangell L: The nature of conversion. J Am Psychoanal Assoc 7:632, 1959
6. Zeigler F, Imboden J: Contemporary conversion reactions. Arch Gen Psychiatr 6:277, 1962
7. Scheiffer I: The psychosomatic study of the development of a conversion symptom. Int J Psychiatr 43:169, 1962
8. Slater E: Hysteria. Br J Psychiatr 107:359, 1961