

Head Trauma, Traumatic Neurosis, and The Forensic Report

LAWRENCE K. RICHARDS, M.D.*

The central nervous system responds to phenomena which are categorized as organic (physical) and functional (psychological); all of these have their basis in the psychological status of the cells of the central nervous system, hereinafter called CNS, since laws of physics and chemistry apply to all the human biological systems. It is still customary, however, to refer to the physical and the psychic aspects as if they were completely separate areas. This becomes an increasingly difficult distinction when physical trauma occurs to the CNS, particularly the brain, because all such significant traumas will have varying degrees of both physical and mental/emotional symptoms and findings. These, of course, reflect the impingements that have occurred on the human organism.

The examination of such a patient is often difficult; the coordinating of the results of neurological, psychiatric, psychological and radiological examinations is even more difficult. If surgical intervention has been necessary, additional factors may require assessment. If the trauma interrupts and interferes with the processes of maturation at a particularly important stage of growth and development, such as the pre-latency or the several adolescent stages of development, additional problematic potential occurs.

The following describes such a complicated case occurring in a mid-adolescent female who at the age of 17 sustained a severe closed head injury secondary to an automobile accident. This paper has two major parts, the first derived from the forensic report illustrating the intricacies of such a case, and the second forming a discussion of the interface among neurology, psychiatry, and law involved in aspects of this case report. Recommendations must be given carefully, but they are a necessary portion of the report because most lawyers have insufficient understanding of bio-psycho-social dynamics beyond the immediate confines of the adversary process *per se*. It is necessary for the good forensic psychiatrist to supplement the attorney's knowledge of the human being in its overall milieu, since one hopes that the patient lives long beyond the time span of the examination and litigation.

Case History

The case history of this adolescent female, who was already 19 years old by the time of referral, illustrates all of the aforementioned aspects except

*Dr. Richards is the guest editor of this issue. See note, p. ix.

that of surgery. Before the accidental collision she was a C-plus or better secondary school student, was apparently considered adequately adjusted by her teachers, and was generally understood and liked by her peers. There was a past history of family discord, mental illness in the mother, and at least maladjustment on the part of the father. She had been called upon to perform some of the parenting tasks for the younger siblings, and she had received some therapy at the county mental health center because of frustration, depression, and adjustment problems which were apparently stimulated by the stress of taking on parenting duties before her own physical and mental growth was completed; these problems were further complicated by the results of the auto accident.

The accident occurred in the latter part of the junior year of high school as she and two of the younger siblings were being driven to school by their father. The father apparently made a maneuver with the car which may or may not have provoked or at least contributed to the accident; although this issue itself resulted in additional legal activities, at this point it is mainly pertinent to note that the car in which the patient was traveling was hit by another car. Her father was uninjured, and one sibling only received injuries not requiring hospitalization; the other sibling was killed, apparently dying outright at the scene. The patient in question had to be taken to the local trauma center and hospitalized. She was unconscious, had bilateral positive Babinski signs and hyperactive deep tendon reflexes, and manifested decerebrate rigidity if stimulated. There was a right frontal echymosis and an apparently undepressed right frontal skull fracture. Due to the development of anisocoria and right sided weakness, arteriography was done and reported as normal; the echoencephalogram showed a two-millimeter shift from right to left. Computerized axial tomography of the brain, hereinafter called CAT scan, was not an available diagnostic procedure in the surrounding area.

The patient remained unconscious "for several days," and upon regaining consciousness she manifested what the neurosurgeon further described as being aphasic for a couple of weeks, becoming increasingly oriented, having a very silly affect, and at times still having jumbled words and phrases. No psychiatric consultation was obtained. After being hospitalized twenty-five days, she was released to go home; the only followup scheduled was a *pro re nata* office session with the neurosurgeon.

Since she was discharged from hospital after the school year had been completed, and since her grades had previously been so satisfactory, she was given full credit for the junior year's classes. Little has been determined about the ensuing summer months, but upon return to school for the senior year it became apparent that she did not have the same academic and social competence which she had previously manifested. Some teachers eventually graded her commensurate with what they estimated she could have obtained before the accident and commensurate with the effort they noted her to be expending currently. Her peers aided her in ways they could. The patient herself noted her deficiencies and felt deep embarrassment; she encountered deep frustration as she attempted to express herself and found she could not express what she felt she should know or thought she did know. She was now also encountering learning difficulties she had never had before. She became increasingly embarrassed and frustrated, and she began to withdraw;

her old friends did not know how to cope with her failure to cope. The patient began to employ sexual looseness as a means of maintaining relationships with male friends; she had great guilt about this. She was seen to do compulsively well with certain tasks in Home Economics class, and this led to some hope she could achieve employment as a seamstress. She was eventually graduated from secondary school with her class, but her grades were now D's and low C's; one cannot say how many should have been failures *per se*.

She did not do well in post-graduation employment, and she dropped to progressively lower jobs in the apparel industry. Her concentration and her synthetic functions were poor. She became angry at God, depressed, and down on life. Her attorney eventually obtained psychiatric consultation for legal purposes.

Examination

In the process of evaluating her for existence of illness secondary to the accident, this psychiatrist learned the following: she had some post-accident therapy by a social worker at the same mental health center, further therapy was going to be necessary just to complete the forensic examination, and she intermittently manifested a triad of stuttering, a little laugh, and the statement "I'm sorry." This triad of findings was eventually called the neurotic triad because it became obvious she manifested those three findings in that exact sequence repeatedly when she was anxious and encountering data retrieval problems, and because of her consistent anxiety, uncomfortableness, squirming in the chair, and blushing vasomotor response. There was a definite clinical feeling of neurotogenicity in these observable manifestations, their timing, and their effect on her forming an interpersonal relationship with this psychiatrist. The triad nearly always had the effect of her being self-stimulated into further shame, avoidance, and withdrawal. With some modest supportive and directive psychotherapy, she learned, at least in the presence of the psychiatrist, to slow her reactions and to search for other words, expressions, or sentences with which to approach the stimulating issue or question. She eventually even arrived on time for the third session; her general anxiety level was down, and her self-respect and confidence were improved.

A fourth session was held five months later, following the gathering and studying of the teacher reports, transcript, mental health center reports, and psychological test results; approximately five weeks of the time that lapsed was related to the effects of two serious respiratory infections sustained by the psychiatrist. During the second attempt at holding the fourth session, the patient was noted to be more anxious, and she described why she had failed the first attempt: she had been trying to find a young male to whom she had loaned \$100 after meeting him only once while shopping for groceries.

Diagnostic Considerations

The examination and reports were supportive of three diagnoses: a pre-existing original neurosis, organic injury and deficit, and development of an additional neurosis secondary to the traumatic injury. The data gathered from this relatively brief examination indicated that the secondary or

traumatic neurosis was due more to the actual residual organic deficit and its influence on her psychic growth and function than to the overall emotional traumatic experience of the accident, even though the latter was obviously a life change event of great threat and disruption. Further comment will be made on this later.

The diagnosis and significance of the actual organic trauma and residual deficit was based on the status illustrated by the immediate post-accident neurological findings reported by the neurosurgeon, the neurosurgeon's workup, the patient's course in the hospital as reported by the neurosurgeon, the psychiatric sequential examination sessions, the psychological test results, and the finding of intermittent right frontal and bifrontal three to four hertz on EEG more than two years after the accident.

The diagnosis of the development of a new neurosis after the trauma of the accident was based on the neurotic triad as manifested objectively by the patient and observed by the psychiatrist repeatedly at different settings, the triad's favorable response to very modest amounts of psychotherapy, the teacher reports, the mental health center reports, the psychological test results, the patient's arrested psychosocial development, and the maladaptive reactions, defenses, and behaviors of shame, avoidance, withdrawal, sexual behavior, guilt, *et cetera*.

Recommendations to the Referring Attorney

The primary recommendation was that the patient and attorney had just cause for litigation, as the patient had suffered both physical and mental traumas, arrestation and deprivation of normal adolescent growth and development, employment failures, and additional emotional traumas from (1) the organically derived frustration and learning disorder, and (2) the psychically derived neurotic functions based upon the inability to retrieve previously learned data, the anxieties, the embarrassments, and the guilt. The additional recommendations were that the patient should be watched for the development of epilepsy, that any settlement that she should receive should be in divided amounts rather than in one lump sum, and that her rather quick response to psychotherapeutic measures employed in the examination indicated that an attempt at intensive individual psychiatric treatment was warranted. Several questions posed by the attorney in the referral letter were also answered, such as her ability to drive, be employed, etc.

Discussion of the Interface among Neurology, Psychiatry, and Law in This Case

This is a compensation case, and the issues of truth v. non-truth, reality v. non-reality, and genuineness v. simulation become involved immediately. The terms "accident neurosis" and "compensation neurosis" indicate the existence of Homo sapiens' all too strong tendency to try either to get something for nothing or to get more than is warranted. It is maintained that this case is a genuine case of organic trauma with a secondary traumatic neurosis. It is unusual in that the neurotic manifestations can be traced to the specific ego function deficit wherein the brain's ability to retrieve already learned or assimilated data has been damaged. In addition to the new learning disability and its deficits in accumulation of new knowledge, there

has developed an inability to use old knowledge followed by subsequent, direct development of a series of maladaptive responses.

Concepts and observations taken from the literature support the genuineness of this case. Henry Miller and Niall Cartlidge refer to a review of 200 consecutive cases of head injury referred for medicolegal examination wherein the accident neurosis was very uncommon after severe head injury.¹ Earlier work by Miller and Stern utilizes head injury followed by posttraumatic amnesia of one to seven days as the definition of severe head injury.² This patient was comatose for "several days," and the author has considered this fact to more than qualify her in this category. W. A. Lishman's study of brain damage and psychiatric disability in 670 cases of head injury followed over five years consisted of patients whose brain damage was known in extent and location due to necessitated surgical exploration. He defined psychiatric disability as "disturbance in any area of mental life as reflected by impaired intellectual function, disorder of affect, disorder of behavior, somatic complaints without demonstrable physical basis and/or the existence of formal psychiatric illness."³ This patient has three of the four major areas of symptoms and signs used by Lishman in the estimation of psychiatric disability, that is, the intellectual, affective, and behavioral disorders. Lishman's studies showed that the affective and behavioral disorders, as well as the somatic complaints, were associated more frequently with right hemisphere damage.⁴ This same study showed these three categories to be more frequent after frontal lobe damage than elsewhere. This patient's EEG tracing showed bifrontal abnormalities, with the right being more abnormal than the left. The intellectual impairments are especially associated with damage to the parietal and temporal lobes of the brain and are less frequent after damage to the frontal lobes of the brain.⁵ Initially this might seem to be inconsistent with this case until one notes that "less frequent" is not exclusive. Indeed, additional data described later support the thesis of wider bihemisphere damage.

Additional neuro-forensic-psychiatric points derivable from the Lishman study are that all the component symptoms of the behavioral disorders noted by Lishman show the frontal association, especially the sexual and criminal behaviors, which were found almost exclusively after frontal lobe wounds. Although this patient is not known to have behaved criminally, her sexual behavior was greatly changed after the accident, and it was a great source of anxiety and guilt in itself. Her sexual behavior was also an obvious neurotic approach to maintaining friends and coping with the unavailability of her old interpersonal skills. Loss of function and loss of friends occurred, and she used sex as a method of reversing this.

Discussion of This Case, the Report, and Some Forensic Aspects

Most wondrous is the absence of psychiatric consultation before the patient graduated from high school; in the light of Lishman's studies, a good argument could be made for obtaining psychiatric consultation at least during the last week of hospitalization. The fact that she came to the psychiatrist's attention only through forensic workup is an interesting and perhaps medicolegal indication of the need for more utilization of psychiatric services by our American medical colleagues, as well as a warning

of what is to come from the current belief that non-medically trained psychotherapists are equal or nearly equal professionals in the mental health field. There was no indication that either of the mental health center social workers asked for psychiatric input or psychological testing; the latter was requested as part of the psychiatrist's evaluation. The psychologist's report, which later found its way into court, indicated that the patient was showing she had not profited from what she learned, but no connection was made among the organic trauma, the organic deficit, the anxiety, and the development of additional neurotic behavior despite the existence of previous neurotic anxieties and depressions. The psychiatrist's report did take note of the patient's poor judgment and her normal and neurotically complicated psychic need for friends, and the recommendation was made that she not be given the entire amount of any monetary compensation which might be awarded in one lump sum; he should have dealt with these matters more directly in his report by raising the questions of the need for guardianship of finances and/or person. More medical aspects can be considered. The information regarding the mother's repeated mental illnesses gives clue to the possibility that manic-depressive illness may exist in this family. The indication for obtaining the expensive medical test of CAT scan of the brain is one to be considered, not only because of the issue of completeness of workup v. the problems of the rising cost of care, but also because of the issue that a picture is worth a thousand words in a court of law as well as in general life. Physiological assessment using lie detection methods would probably further expand the demonstratable data base.

In this case CAT scans were not available in the area at the time of forensic psychiatric workup. In the nearly 1½ years that passed between the completion of the workup and the case finally coming to court, two things had occurred: (1) this psychiatrist had another lesson in the legal process inasmuch as he had thought he had not heard about the case up to then because it had been settled out of court, and (2) CAT scans became available in the community. By now the case had grown to major proportions, and there were to be as many as eight attorneys before the bench, four to try the case in question and four for the benefit of other parties involved in the issues of the accident. One side was recontacting the neurosurgeon, and a CAT scan was sought and was obtained without the psychiatrist's awareness. The CAT scan reading was: ". . . ventricles enlarged; enlarged for any age."

Conclusion

The case was tried and the judge eventually ruled that the psychiatrist's testimony was based on findings other than the subjective statements of the patient. Despite the objection of one of the attorneys opposing the plaintiff's position, the psychiatric testimony was admitted in evidence and the jury was instructed to use what it had heard in its deliberations. In accordance with the judge's ruling, the jury was never informed of the one sibling's death. The jury found for the plaintiff and eventually awarded her a sum that her attorney later described as double the amount offered as an out of court settlement. The exact amount awarded cannot be stated here, but it was significantly less than one hundred thousand dollars.

The use of the term "traumatic neurosis" deserves more explanation. It

could be debated that this is not the best term to describe the additional neurotic symptoms, signs, and behaviors which developed in this patient post accident. The frequently described symbolic aspects were not elicited in the examination; however, these still could be manifested in treatment sessions of a case such as this. Traumatic neuroses are described in the psychosomatic literature as developing three to six months post trauma and being nonspecific, showing mixtures of depression, hypochondriasis, phobia, anxiety, obsessive-compulsiveness, or conversion reactions.⁶ Traumatic neuroses are distinguishable from the post-traumatic syndrome by the latter's having varying amounts of anxiety, fear, startle reaction, fatigue, dizziness, nightmares, repetitive dreams, headache, insomnia, palpitations, and irritability.⁷ The author proposes that the physical trauma and subsequent changes in ego function (interpersonal, intrapsychic, and basic brain information processing changes) are sufficient to warrant the term traumatic neurosis. There may be inherent in this case an understanding of some of the physiologic bases for the cellular functions which psychiatrists call neurotic. Perhaps some traumatic neuroses are due to an intrapsychic perception of the organic trauma to the brain and life's fragility. Certainly the most traumatic life event in this person's life up to the time of trial reoccurs each time her brain encounters the inability to retrieve data that it knows has been previously accumulated.

References

1. Miller H, Cartledge N: Simulation and malingering after injuries to the brain and spinal cord. *Lancet* 3:580-585, 1972
2. Miller H, Stern G: Long term prognosis of severe head injury. *Lancet* 1:225-229, 1965
3. Lishman WA: Brain damage in relation to psychiatric disability after head injury. *Br J Psychiatry* 114:373-410, 1968
4. *Ibid.*
5. *Ibid.*
6. Martin MJ: Psychiatric aspects of patients with compensation problems. *Psychosomatics* 2:81-84, 1970
7. *Ibid.*