Recognition of the Personal Injury

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In 1710 Antonio Stradivari fashioned a violin which, for two hundred forty-seven years, remained intact. In the year 1957 the back of the violin was broken. The insurance carrier liable for the injury paid the owner approximately six thousand dollars in damages (including the cost of having the broken back repaired). The fracture could be compared to an incomplete greenstick fracture of a scapula\(^1\) — the costs of repairing the fractured scapula or the fractured violin, do not compensate the owners for the actual losses they have incurred.

It is considerably more difficult to evaluate pain and injury to a human being than damage to the violin. Attorneys attempting to gain compensation for injury must understand the nature of the human machine — a machine more perfect and complex than any yet designed by man.

Today your heart beats one hundred and three thousand times; your blood travels one hundred and sixty-eight thousand miles. You breathe twenty-three thousand times a day and inhale four hundred and thirty-eight cubic feet of air. And today you will speak four thousand eight hundred words. You have seven hundred and fifty major muscles and use seven million brain cells. Now where in all the world is there a machine like you?\(^2\)

Ultimately the attorney must place a monetary value upon his client's pain and injury. To do this accurately all aspects of the human being must be considered. This article outlines the fundamentals of a thorough medical-legal recognition of the personal injury.

**Problem of Specialization**

The age of specialization has created a fragmentary approach to the problems of the injured human machine. Yet, if the specialist — lawyer or doctor — fails to relate the fragments to the whole, and, thereafter, to study the total human being, he will fail to perform his most essential

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1. A greenstick fracture of the scapula is a fracture of the shoulder blade (scapula) in which one side of the bone is broken, the other being bent. *Dorland, Illustrated Medical Dictionary* 530 (23d ed. 1957).
task. Recently, a doctor who had a general practice was asked to describe the nature of his specialty; he replied simply, "I specialize in the human skin and its contents." The personal injury lawyer’s study extends even beyond the "skin and its contents" — it is a study of the single or multiple injury and the relation of that injury to the client’s physical, emotional and economic problems. Further, the lawyer must study the methods, if any, by which his client may obtain compensation for his injuries.

The problem of specialization disturbs the attorney, not only with regard to his own lack of medical knowledge, but also with regard to the highly specialized nature of the medical profession.

The practice of medicine today is so splintered that the patient needs a secretary and chauffeured car to keep his appointments with the many specialists. Medical clinics provide a partial solution to the problem of specialization. In clinics the patient receives a complete examination by groups of specialists working in concert. Unfortunately, however, men on the staffs of these clinics are at times reluctant to come into court. They are so overwhelmed with work that they resent being asked to testify.

If any doctor at such a clinic is willing to testify he may become a key witness. However, when expert medical testimony is not secured, the complete examination received at the clinic is still of great value.

The clinic is particularly useful in head injury cases, because the last step in a "no-findings" case is the clinic’s psychiatric ward. In cases where there is no physical injury, this final examination may uncover psychiatric damage which will serve as a basis of recovery. Another advantage to using the clinic approach is that juries generally have great respect for these institutions. The prestige of a clinic often attaches to its representative in the courtroom.

Many plaintiff’s lawyers complain that clinics are too "conservative" and that they underestimate the client’s injuries. These fears are unfounded. The diagnosis is as good as the medical staff, and many of the greatest doctors in America are on these staffs. In complicated cases the clinic approach is indispensable.

**LAW AND MEDICINE — AN IMPOSED ALLIANCE**

The mutilation of arms, legs, eyes and bodies by the equipment of the machine age, the atomic age and now the space age is no longer accepted by the injured or the courts as the individual’s contribution to the advance of science. A growing army of victims of our highly mechanized society confronts our courts with insistent demands for relief. Lawyers and doctors have conducted a concerted drive to meet the demands of the injured, and the problems of the injured have brought a necessary alli-
ance to the two professions. The burden of proof to establish the causal relationship of the injury to the trauma rests upon the lawyer. But he cannot develop a reasonably intelligent approach to that problem without a basic understanding of medicine.

Lawyers are well trained to proceed to rapid determinations of the purely legal questions, but are they equally well prepared to establish the medical aspects of the case, the causal relationship between the trauma and the injury?

It seems fair to estimate that 7 out of every 10 contests turn, not upon doctrines of law, but upon medical evidence as to what the particular harm is and what caused it to come about. The law schools overlook almost to unanimity the one homely fact — 7 out of every 10 litigated personal injury cases turn on medical considerations rather than legal, and medical evidence is the one field about which the young lawyer graduate knows nothing, as his professors know about as much. As the volume of personal injury litigation has increased over the past several years, the need for medical-legal know-how has been pressed home to most practicing lawyers. They have bought more medical books than ever before and the newer law books on trial practice have been including more medical lore than ever before. At the same time, legal institutes have been veering away from the once-popular subjects of taxation, corporate structures, procedure and the like toward legal medicine. In just the past 5 years the medical-legal variety of institute has grown to the point of outdrawing in attendance any other kind of practical training course.

The medical schools are also recognizing the need for more cooperation and understanding between the two professions.

Medicolegal clinics and seminars have become a vital part of the postgraduate education of the lawyer as well as of the physician. . . . A more intelligent use of medical libraries and research materials by the lawyer and a better understanding by the physician as to the part he is to play in the courtroom result from our joint enterprises of working and studying together.

Much in the way of opportunity lies ahead for us of the medical and legal professions. Through the continuation of the spirit of good will and cooperation, . . . much can be accomplished toward a better life. As we strive to develop these technical skills and knowledges peculiar to our respective professions, may we also strive to work together for the attainment of the broader goal of making this a better world — physically, socially, morally and spiritually. And then, as succinctly stated by Oliver Wendell Holmes, the renowned jurist and son of a physician, we "may catch an echo of the infinite.”

**THE ATTORNEY’S ROLE IN MEDICAL ANALYSIS**

The lawyer in personal injury matters is an observer, listener, recorder, reporter and interpreter. By ignoring any one of these functions, the lawyer may find himself incapable of completing the chain of causa-

tion which may bring his client's losses to the level of compensable injuries. Medical literature is replete with examples of diagnostic errors committed by doctors. However, examples of mistakes made by personal injury lawyers who failed to recognize the "uncommon injury" or the medically undiagnosed injury, suffered by their clients, have not been formally collected. The lawyers' mistakes are found between the lines of the opinions in the nisi prius, appellate and supreme court reports. This is where he "buries" his mistakes.

Signs and symptoms of trauma should be examined by the lawyer and doctor with equal thoroughness and care. The process of examination begins at the first interview. Only after the appearance, history and complaints of the client have been carefully scrutinized does the "face" of the injury begin to take shape.

**Observing Clues to the Client's Injury**

The appearance of the client frequently provides a vital clue to the injury he has suffered or to the disorder which has resulted from his accident. The discerning attorney will scrutinize his client's entire attitude, including his expressions, manner of speech and general movements. Often the attorney will observe physical manifestations which were not apparent when the doctor made his examination. An example of a physical manifestation which the attorney may detect is a herpes zoster.

The body contains a variety of chemicals. The natural controls which keep these chemicals in balance can be disturbed as the direct result of trauma. When the body chemistry is unbalanced certain clues to the location and type of injury are produced, and, thereafter, the injury can be definitely diagnosed — one of these clues apparent to the eye is a herpes zoster. A herpes zoster has been defined as "a form of vesicles — a blister-like small elevation of the skin — appearing in clusters, distributed along the nerve trunks."

The doctor sets up three prerequisites to establishing a causal relationship between herpes zoster and trauma:

1. Herpes zoster, a systemic disease due to a neurotropic virus, has an incubation period of 7 to 21 days.
2. Trauma must be established; it may be physical, chemical, thermo, or the herpes zoster may be due to infectious diseases or neoplasms.
3. To accept trauma as being causally related to herpes zoster, the onset of the disease must appear within the incubation period of the virus.

7. Id. at 42.
Here, then, is a clue that the searching eye of the injury lawyer can see and investigate. What appears to be a "cold sore" on the lip may be a manifestation of injury to the trigeminal nerve (fifth cranial nerve, distributed to the face, tongue and teeth) perhaps resulting from a blow against a dashboard. The pain is intense. If the herpes zoster involves the eyes, scarring of the cornea and blindness may result. The client may have been seen by the doctor days before the condition of herpes zoster developed. If the attorney notices the condition, he should immediately report it to the doctor, and an appointment should be made to have the client re-examined. This is only one example of injuries which may be discovered by the attorney who is alert to the unusual appearances of his client.

Preparing the Medical Case History

The medical case history taken by the injury lawyer should be of the same caliber as that taken by the doctor. A complete history will provide many clues regarding the nature of the client's injury and the value of that injury in a courtroom. It should be taken in the manner suggested by Dr. Cyril Mitchell MacBryde:

Time and skill are required in obtaining an exact and sufficiently complete history. The physician must not hurry, nor must he seem hurried. All his attention must be devoted to the patient, who must feel that the doctor is interested, sympathetic and eager to help. . . . The purpose is to get the patient to talk so that the doctor can listen and learn. The doctor says only enough to keep the patient's story going. Each statement of the patient must be considered in relationship to the aid it may furnish in understanding his chief complaints or symptoms. The patient may not present the story of his difficulties well, or in logical order; he may use misleading words in describing his symptoms; he may omit important relevant information. All these defects may be corrected if the physician asks the proper questions — not merely to fill spaces on a printed form, but to develop the story. It is best to let the patient tell his story in his own words whenever possible. Many patients will present a coherent, and concise description of the development of the presenting symptoms. When, however, the patient wanders, or when important facts are omitted, pointed questions are necessary. Care must be taken that the answer is not implied in the question — that the questions are not leading.³

There was a time when lawyers unquestioningly accepted the diagnoses contained in medical reports. This is not true today. The inquiring lawyer will read a medical report in the light of information he has obtained from the client in preparing his medical case history. He must develop the ability to recognize the possibility of an undiagnosed or a misdiagnosed injury.

³ MacBryde, Signs and Symptoms 2 (3d ed. 1957).
The concluding paragraph of the doctor’s report may contain a medical diagnosis which provides little promise for the client’s case. The diagnosis is expressed in several different fashions:

1. “Patient’s symptoms present a bizarre pattern, inconsistent with my clinical findings. It is recommended that the patient be referred to a psychiatrist for evaluation.”

2. “The patient’s complaints are on a functional level, and he will need continued reassurance. Progress reports will follow as warranted.”

3. “The patient’s complaints are largely psychogenic in nature.”

4. The doctor in desperation may write — “I can find no basis for the present complaints of pain. It is my opinion that this patient is suffering from a compensation neurosis and when the pending litigation is concluded, the complaints will subside.”

5. Finally, the white flag of complete surrender is seen in this type of language: “The patient is malingering. . . .”

There are several reasons why these discouraging conclusions should not automatically be accepted by the personal injury lawyer.

Detecting a Misdiagnosis

In a clinical study conducted by Doctors Robert H. Gruver and Edward D. Freis, the need for diagnostic investigation is made clear with appalling impact. They made a study based upon 1,106 post-mortem examinations on patients who had been hospitalized or treated immediately prior to death to determine the number of cases in which the fatal disorder had been improperly diagnosed. Of the total 1,106 autopsies performed, 6 percent had been clinically misdiagnosed — 64 people died of causes that were not suspected during treatment. There were two major reasons for this high degree of diagnostic error. One of the foremost factors appeared to be lack of adequate history. The doctors and

9. Dr. Thomas S. Szasz has raised the very valid question of whether malingering can be classified as a diagnosis:

This idea of using the term malingering as if it were a diagnosis is, in my opinion, a logically unsupportable position, for it ignores or denies what is probably the most important element in the meaning of the word. Namely, that it is applied to a bit of behavior which society, and presumably the psychiatrist himself regards as morally despicable. In order to discuss the question ‘Is malingering a diagnosis?’ one cannot help also asking, ‘What is a diagnosis?’ Diagnosis is usually defined as the art or act of recognizing disease from its symptoms, and the decision reached . . . has two important aims, one being to help the physician himself in selecting the proper treatment for the patient, and the second, to enable the doctor to communicate with his fellow workers . . . it (diagnosis) must essentially be a clear description and explanation of a phenomenon, not its praise or condemnation. All things considered, it appears necessary to conclude that malingering is so heavily impregnated with the moral condemnation of the behavior to which it is applied that its usefulness as a scientific diagnostic term is rendered completely invalid. Szasz, What is Malingering? 6 MED. TRIAL TECH. Q., Sept. 1959, pp. 31-33. (Emphasis added.)

10. CURRAN, LAW AND MEDICINE 175 (1960).
hospital personnel had simply failed to obtain, or were unable to obtain, complete histories in 29 of the 64 cases; such failures directly resulted in misdiagnosis. A second major cause of faulty diagnosis was the tendency to ignore certain symptoms — the existence of medical "blind spots":

The physician's history or progress report would clearly record an important sign or symptom but this would be completely discarded in arriving at a diagnosis. Eighteen of the sixty-four patients (28%) had experienced signs or symptoms which were ignored. Five patients had unexplained pain, five patients hemorrhaged, and four patients had unaccounted for fever. Other omissions were unexplained shock, fasciculations, rales, and enlarged spleen. . . . There was a common failure to take into account abnormal laboratory, electro-cardiographic, or roentgenographic reports. . . . Three ignored abnormal spinal fluid findings. In each instance this abnormal laboratory report reflected the correct diagnosis but was overlooked by the attending physician.

In carefully reviewing the charts of these 64 incorrectly diagnosed patients, it became apparent that in 10 cases (16%), there was a prejudiced viewpoint or blind spot on the part of the doctor in charge. A more alert and critical approach together with thoroughness on the part of the responsible physician will decrease the incidence of diagnostic errors.\textsuperscript{11} (Emphasis added.)

Thorough study, by doctor and lawyer, of the history and complaints of the client-patient is well rewarded with higher verdicts and settlements, and with other less tangible benefits. Often, illnesses and injuries unrelated to the original trauma may be uncovered; prompt treatment may alleviate the client's pain, or even save his life. A medical report which recites a lack of causal relationship between the trauma and the disorder may cause some disappointment to the attorney; but with the disappointment, there is the gratification which comes through helping someone toward a better life. Examples of conditions discovered in clients, who had been dismissed by doctors and were referred back to them by lawyers, are: (1) brain tumors, (2) cancers, (3) congenital syphilis in a 9 year old, (4) tuberculosis, (5) leukemia, (6) gall bladder disease, (7) cardiac problems, (8) kidney stones, (9) diaphragmatic hernias and inguinal hernias and (10) diabetes.\textsuperscript{12} None of these conditions was caused by the trauma which was the possible source of litigation, but in some cases there had been an aggravation of a pre-existing condition as a direct result of the trauma.

Unfortunately, neither doctors nor lawyers are infallible. The learning process of the lawyer is truly a system of trial and error and, when necessary, appeal. The same is essentially true of the physician. However, the difference is that the physician's errors are frequently not appealable;

\textsuperscript{11} Id. at 178, 179. In one instance an exploratory laparotomy was fatally postponed when symptoms were attributed to psychoneurosis.

\textsuperscript{12} All of the examples referred to in the text were discovered in cases with which the writers dealt personally.
the patient does not always survive the physician's mistakes. Thorough examination of the patient's complaints would materially reduce the incidence of error in both professions. Dr. Alvarez of the Mayo Clinic has keenly observed one factor which frequently prevents thorough examination:

Many a time a patient will question an opinion or a pronouncement, and then, instead of getting angry and impatient, we physicians must stop to listen and, in the face of new or amended facts, to change our diagnosis. One of the saddest features of our medical practice is that at times we physicians yield to a human trait, and when we are stumped diagnostically or therapeutically, we get angry with a patient rather than with our lack of knowledge in disease and/or inability to cure. (Emphasis added.)

If a client continues to complain about pain, his complaints should be heard. Where no physical manifestation of injury is detected, the client's complaints may suggest that a new approach is necessary. The following incident clearly indicates the value of continued investigation when pain remains unexplained.

The plaintiff alighted from an electric trolley and stepped upon wet pavement, before releasing her grip on a pole inside the coach. There was a short circuit somewhere on the trolley which caused an electric current to enter her hand and pass through her body to the wet pavement. There was no visible sign of injury upon her body. "I felt like I was being electrocuted. I was paralyzed for a few seconds. I could not let go of the pole. I thought I was going to die." She began to develop pain in the abdomen, and her menstrual cycle became extremely painful and irregular. She was in a state of high tension. The attending physician, a general practitioner, reported that the patient was suffering from the after-effects of a mild electric shock. "Prognosis excellent for complete recovery within two to three weeks." Six weeks later the "menstrual cramps" became unbearable. Only the client's complaints gave any indication of the severity of her injury. The attorney handling the case checked to see if there was a causal connection between the electric shock suffered and her menstrual cramps and abdominal pain. His investigation proved that there was. Electric shock has been known to cause violent and sudden contracture of the abdominal muscles. With this information the attorney referred the client to a gynecologist who diagnosed her condition as a "retroverted uterus directly caused by the sudden muscle contracture following electric shock." She was finally hospitalized for surgery — a complete hysterectomy. The plaintiff was thirty-two years old, married and had two children. She had the right to have

14. This incident was an actual case with which the writers dealt personally.
15. 1 GRAY, ATTORNEY'S TEXTBOOK OF MEDICINE 780.32 (3d ed. 1958).
more children if she so desired. The inability to have other children was directly traceable to the electric shock suffered when she was alighting from the trolley coach. What was reported by the attending physician to be a condition with an excellent prognosis was actually a condition which resulted in permanent disability.

**The Inaccurate X ray**

The search for truth in law and in medicine is frequently thrown off-track by a negative X-ray report or laboratory finding. The one clue which most often remains constant is the client's continuing complaints of pain. When X rays are reported negative, and the client-patient's pains and clinical symptoms continue, serious consideration should be given to the probability of an occult fracture. An occult fracture is defined as one "which gives clinical signs of its presence, yet cannot be demonstrated by X-ray examination until after reparative changes have occurred." (Emphasis added.)

Here the clinician must be alert. A negative X-ray must not lull the clinician into a sense of false security. For example; a fracture of the carpal navicular bone (of the wrist) may not show for many months on X-ray. Numerous repeat views at many angles are often required to confirm diagnosis of fracture where there is clinical evidence of discrete tenderness, swelling and pain on activity.\(^1\)

Other areas in which occult fractures may be later discovered are epiphysical fractures (those involving the growth centers in children), spiral fractures of the tibia, spines, wrists, and undisplaced fractures of the hip. Occult fractures involving the feet and ankles may result in damage to ligaments and soft tissues resulting in permanent disability.\(^1\)

If the client has suffered back injuries, and X rays, taken a few days or weeks after the trauma, are reported negative, there may actually be a compression fracture of the body of the vertebra:

Fractures of bones are usually best demonstrable in X-rays taken immediately after their occurrence. Months and years after the injury, they may become more and more difficult to record on the X-ray plate. There is an exception to this. After a back injury, an X-ray may show the vertebrae (the bones of the spinal column) to have their usual appearance — no signs of a compression fracture; but six months later, another roentgenogram may show that one of the vertebrae is compressed.\(^1\)

If a lawyer, who encounters a case of continuing complaint suggestive of a fracture, fails to call the complaints to the attention of the doctor, he may never learn the nature of his client's injury.

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18. Id. at 563.
19. Curran, supra note 9, at 51.
The following incident clearly demonstrates the dangers of X-ray reports. A dentist was involved in a "minor" rear-end collision, in which he suffered no apparent injury. Damage to the car was less than sixty dollars. He had been offered five hundred dollars two days after the collision by an over-zealous claim adjuster. Because the dentist had a "slight twinge of pain" in the cervical (neck) region, an X ray was taken. The X ray taken one day after the collision was reported negative, and a fracture was ruled out. The client was advised to wait to determine if the "twinge" would subside. When he returned to his practice (one which requires considerable physical strength) the "twinge" became a pain and the pain became progressively worse until, four months after the collision, he was no longer able to continue his work. Another X ray, taken five months after the collision, disclosed an area of calcification. An orthopedic surgeon reported that this calcification was "due to a tear of the interspinous ligament at C-4, C-5 level." The ligament was torn by the sudden snapping of the neck which in turn caused bleeding within the ligamentous sheath. Because fresh blood is not opaque to X ray (the X ray simply penetrates the fresh blood and cannot be seen on the X-ray film), it took the five intervening months to allow the extravasated blood to calcify, at which time it was opaque to the X ray. The case was settled for thirty times the original five hundred dollar offer, and benefits from several health and accident policies were collected.

There are times when the attending physician will not suggest repeat X rays, reasoning that the original negative report renders useless additional X-ray examination. The doctor who advises that no X rays whatsoever are necessary because the symptoms are "mild in degree" should be questioned. Failure to order or to take repeat X rays when clinical symptoms persist may be a mistake; but, in some situations, failure to conduct an initial X-ray examination has been held to be malpractice. A California court held that judicial notice would be taken of the importance of X-ray examination to discover possible fractures; the court concluded that the showing of a failure to take X rays established a prima facie case of malpractice.

It must also be remembered that X rays which are accurate do not tell the whole story of the client's injury.

The results of trauma are never limited to bone. A fracture involves primarily all the soft tissues in the injured area as well as the bone; secondarily, all the undamaged structures of the injured region; and, finally, the physical, economic, and emotional state of the injured person. Identical fractures cannot produce identical problems, if for no

20. This incident was an actual case with which the writers dealt personally.
other reason than that they occur in different persons. (Emphasis added.)

Thus, it becomes increasingly evident that X-ray reports and other medical reports should be investigated and studied by the attorney. If he is to recognize the existence of an injury and the value of that injury he must obtain a thorough case history from his client.

**Applying The Stress Concept**

Much has been written about the subject of stress following trauma and the disabilities associated with stress — disabilities which were once considered "neurotic ailments." Largely because of the treatises on stress and trauma by Dr. Hans Selye, these "neurotic ailments" are being recognized as compensable injuries. The peculiar reactions of the mind of the injured person are now being more deeply probed by psychiatrists and psychologists. That which at one time was considered malingering now carries the proper title of psychiatric manifestations of injury. Dr. Selye divides stress into three stages; the alarm reaction on the body which affects the tissues, the stage of resistance and the stage of exhaustion. When the body is subjected to stress of any nature, physical or emotional, the alarm reaction occurs. This causes the damaged cells to transmit chemical or nerve messages, which induce the stage of resistance. A healthy, normal individual who experiences stress will immediately respond with the defensive stage of resistance, and the stress will subside. The same stress to a person already under pressure, or one with less resistance, will throw that person into the stage of exhaustion. When resistance is already low, the individual cannot meet the new stress which has been thrust upon him. The attorney must evaluate his client's entire emotional and physical balance in order to determine the total effect of his injuries. Every person has a certain safety factor. Just as a bridge is designed to hold ten or more times the heaviest load it will actually carry, the healthy human being is equipped to meet abnormal strains. Some individuals start out with a very small safety factor, while others exhaust it quickly. The size of the individual's safety factor has a great bearing upon the severity of his reaction to a particular trauma.

For example, the marginal mind has little or no safety factor available when it is injured. In a recent study of 739 men who had sustained head injuries in World War II, followed by additional clinical examination eight to nine years after injury, it was found that headache, usually associated with other post-traumatic symptoms, was present in eighty-two percent of the men, and did not correlate with the severity of the in-

jury.\textsuperscript{24} It bore a much closer relationship to the “neurotic” type of personality and subnormal intelligence. Thus, the results of head injury in terms of social, economic and neurological rehabilitation seem to depend upon not only the severity of the wound, but also upon the quality of the brain which was damaged.

The stress concept is of great importance to the personal-injury lawyer, but he cannot avail himself of its potential unless he prepares a thorough medical case history for every client.

\textit{Handling Special Problems of the Minor Plaintiff}

The professional approach when dealing with injuries to minors requires infinite patience, extreme caution and regular communication with parents, lawyers, doctors and school authorities. In the very young, the problem of communication is difficult. The child cannot describe his headaches, pains and other symptoms with the same clarity usually obtained from the adult. The allowance of sufficient time to elapse between injury and settlement or trial will, in most cases, reduce the possibility of medical error. Statutes of limitation on tort actions, in most states, will not apply to bar recovery by minors; where the injured party is a minor, the statute will be tolled.\textsuperscript{25} The additional time can work to the advantage of the minor-plaintiff.

A child’s injury is generally not described to the doctor or lawyer — it is \textit{demonstrated} by the child. There are symptoms which do not appear until long after the original trauma. That dealing with injuries to children is a specialty, is a fact that has had recognition by doctors, but, unfortunately, this cannot be said of lawyers. Dr. Walter P. Blount, formerly of the Mayo Clinic, warns the orthopedic doctor to exercise great care in dealing with fractures to children:

\begin{quote}
Adults are exposed to a great variety of injuries with a correspondingly complicated etiology and fracture pattern. Their bones break increasingly easily with advancing years so that complex fractures are likely. Except for transportation and farm machinery accidents, the causes for bone injuries in children are usually simple. The bone changes are characteristic and the outcome predictable. The principles of treatment are correspondingly simple. \textit{The fact that most fractures in children heal fairly well with indifferent treatment has led the unwary to neglect the fact that other fractures terminate disastrously unless expertly handled.}\textsuperscript{26} (Emphasis added.)
\end{quote}

It has already been demonstrated that X rays may mislead lawyers and doctors when reported as negative. When a child sustains an injury to the head, even greater suspicion should be aroused:

\begin{itemize}
\item \textsuperscript{24} Walker & Jabion, \textit{A Follow Up of Head Injured Men of World War II}, 16 J. Neurosurgery 600 (1959).
\item \textsuperscript{25} \textit{Ohio Rev. Code} § 2305.16.
\item \textsuperscript{26} Blount, \textit{Fractures in Children} 1 (1959).
\end{itemize}
The presence of a fracture in the skull (of a child) is of minor importance, unless it crosses a sinus so as to admit air or infection into the cranial cavity, or tears a blood vessel or nerve. In contrast to fractures elsewhere in the body there is no muscle pull to add deformity. The prime consideration is not that of the fracture, but rather of the brain damage. When sudden force is applied to the skull there is an immediate increase in intracranial pressure which can be measured. At the same time there is a sudden movement of the brain, which is most marked at the midline or falk. This is followed immediately by a rebound stretch. As a result of the brain movement and increased tension, there may be severe molecular and chemical alterations, small blood vessel rupture, and petechial hemorrhage throughout the brain. The rebound stretch may tear the surface vessels and cause subdural or extradural hemorrhage.\footnote{Emphasis added.}

Symptoms of severe and permanent brain damage take time to make their appearance and they may go undiagnosed, and therefore untreated. Professional men have a great responsibility when handling children's cases to make every effort to narrow the chance of legal or medical error. Custom and practice dictates that the responsibility of determining a minor's case should be that of a jury and should not be left to the sole discretion of a judge.\footnote{There should be no compromise concerning the trial of a minor's case to a jury or in any other phase of the child's claim for damages due to injury.}

CONCLUSION

The attorney is not qualified as an expert to give his opinion, "based upon reasonable medical certainty," regarding the causal relationship between trauma and injury. Only the doctor can pronounce those magic words which enable a jury to conclude that the plaintiff's loss was caused by the trauma suffered. But the attorney must be able to evaluate the doctor's expert opinion; he must be able to demonstrate to the jury the validity or invalidity of that opinion. Without a basic understanding of medical science and a thorough awareness of the factors involved in the development of the client's injury, the attorney will not even be able to phrase the appropriate hypothetical question that will encourage a favorable response from the medical expert.

It would, of course, be impossible to mention all the injuries that have, can and will disrupt the functioning of the human machine. Advances in medical science and changes in legal theory will simplify the problem of establishing the causation of some injuries; in some instance this will work to the advantage of the plaintiff, in others to the advantage of the defendant. But always society will benefit as the standard of care

\footnote{Id. at 229.}

\footnote{The proposition that a minor should not be allowed to waive a trial by jury was first stated in Liserowitz v. West Chicago St. R. Co., 80 Ill. App. 248 (1898).}
required of its members is raised. For example, the discovery of polio vaccine has brought immunity from polio to millions. In the manufacturing of the vaccine, errors were committed, resulting in death and permanent injury to a numbered few. Nevertheless, the injured demanded and received compensation for their losses. Perhaps it was the threat of liability that encouraged manufacturers to produce a safer vaccine. Product liability cases have inspired manufacturers to exercise extreme caution in preparing, assembling and marketing their products. Engineers have been prodded to consider safety in design and structure before releasing their ideas to manufacturers. They are not necessarily motivated by fear of lawsuits, but if fear of being sued is at least one of the motivations, then the injury lawyer has performed a valuable service.

It is hoped that the combined accomplishments of law and medicine will result in a safer modern world. When injury does occur, the task of determining cause and effect will be simplified as a result of greater understanding between doctor and lawyer.