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Intervertebral Disc Injuries in Workmen's Compensation

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INTERVERTEBRAL DISC INJURIES IN WORKMEN'S COMPENSATION

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No lawyer regularly involved in workmen's compensation litigation can do a worthwhile job for his client unless he has a comprehensive and intelligent acquaintance with all branches of medicine. In the ordinary course of his practice, the workmen's compensation lawyer must deal with all types of industrial diseases, and even with disorders in the field of neurology and psychiatry.[1] Familiarity with a variety of medical conditions is made necessary because of such basic medico-legal problems as causation, involving the industrial or non-industrial origin of the disability at issue, duration and the like. Of all the industrial injuries with which the workmen's compensation attorney must deal, none have created as much interest or caused as much comment in recent years, among lawyers and doctors alike, as have injuries to the intervertebral discs.

It is necessary, of course, that one have a fundamental understanding of the intervertebral disc as a medical entity before any discussion can be undertaken of the medico-legal problems that injuries to the discs occasion. The first section of this paper will therefore be devoted to a discussion of the intervertebral discs from a medical viewpoint.[2]

I.

1. *The Intervertebral Disc*[3]

There are twenty-four movable vertebrae in the vertebral column. The cervical vertebrae are the seven vertebrae in the neck area. Below them are the twelve thoracic vertebrae of the chest region, and

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1. Bear, *Workmen's Compensation and the Lawyer*, 51 COL. L. REV. 965, 970 (1951).

2. It should be clear to anyone reading this paper that the author, since he is not a member of the medical profession, does not pretend to have expert medical knowledge of the subject of intervertebral discs. In the discussion of discs that follows, he has not, of course, presumed to develop any theories concerning any facet of the medical problem, but rather has attempted to present factually, with appropriate citations, theories of eminent members of the medical profession who have contributed to the wealth of medical literature pertaining to the subject of intervertebral discs.

The author wishes to express his thanks to Dr. Joseph F. Dorsey, Dr. Robert Hamlin, and Dr. Charles Bradford, all of Boston, who did so much to assist him in understanding some of the medical problems relating to intervertebral discs, and in understanding the doctor's approach to them.

3. See generally, BRADFORD AND SPURLING, THE INTERVERTEBRAL DISC, WITH SPECIAL REFERENCE TO RUPTURE OF THE ANNULUS FIBROSUS WITH HERNIATION OF

below them the five lumbar vertebrae of the lower back. Situated just below the lumbar vertebrae and just above the coccyx and forming the posterior boundary of the pelvis, is a curved, triangular bone called the sacrum.

There are 23 intervertebral discs situated in the vertebral spaces from the second cervical to the first sacral vertebra. These discs compose one-fourth of the length of the vertebral column. The cervical and lumbar intervertebral discs are thicker than the thoracic discs, the lumbar discs composing one-third of the length of the lumbar spine.

Each intervertebral disc is attached to the face of the vertebral body above and below by a thin cartilageneous plate. The disc proper, between the plates, consists of a ring of laminae of fibrous tissue and fibrocartilage called the *annulus fibrosus*. The annulus fibrosus is, in other words, the outer covering of the intervertebral disc. Contained within the annulus fibrosus, and merged with it, is the central substance of which the disc is made. This substance is called the *nucleus pulposus*, which is a moderately tough, but very plastic, tissue of a whitish-yellow color. It is 88 per cent water in the full term fetus, but gradually dehydrates as the human gets older until at seventy-seven years of age it is about 69 per cent water.

The intervertebral discs are the shock absorbers for the forces brought to bear over the intervertebral surfaces of the vertebrae. When a sudden force is placed upon the back, and consequently upon the invertebral discs, the column of fiuid is displaced laterally in all directions, thus absorbing the shock.

Only by means of a fiuid nucleus pulposus could force be evenly transmitted through a wide range of spinal movements. A robust man lifting a 100 pound weight, arms outstretched in front of him with his hands horizontally 75 cm. in front of the lumbro-sacral disc, brings a total of 1600 pounds to bear upon the one lumbro-sacral disc. The average person may never actually pick up 100 pound weights, but the foregoing example should still make it easy to imagine what the effect of our everyday movements would be upon our spinal columns if there were no discs there to act as shock absorbers.

The annulus fibrosus, or outer covering of the disc, is generally tough enough to withstand the pressures placed upon it, but when sudden or repeated pressures prove too much, it tears. This tearing or breaking of the outer ring of the disc is more aptly termed a *rupture* of the intervertebral disc.

When the central substance of the disc (the nucleus pulposus) flows into the spinal canal through the rip or tear (rupture), real trouble

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THE NUCLEUS PULFOSUS 13-40 (2d ed. 1945) (hereinafter cited as BRADFORD AND SPURLING, THE INTERVERTEBRAL DISC); GRAY'S ANATOMY 265-66 (25th ed. 1932); 1 GRAY, ATTORNEY'S TEXTBOOK OF MEDICINE § 11.55 (3d ed. 1949); BLAKISTON'S NEW GOULD MEDICAL DICTIONARY (1st ed. 1949).

begins for the victim. This process of the nucleus pulposus protruding through the ruptured part of the disc is referred to as *herniation* of the nucleus pulposus. This process of herniation may be compared to the escape of air from a blown-out tire.

One should note the difference between the term "ruptured disc" and the term "herniated disc." There can be no pain *resulting from the pressure of escaped nucleus pulposus upon nerve roots* from a disc that is merely ruptured and not yet herniated since the term rupture implies only a tear or break, and has no reference to the events which take place following the breakage.

Courts very often use the term "ruptured disc" loosely, applying it to a set of facts which rather clearly indicate that the claimant's disability is the result of a herniated disc, and although this misuse of the term may not ultimately have any detrimental effect upon the result of the case, it is often a source of unnecessary confusion. One court has even referred to the cause of an employee's disability as "a fractured disc,"[4] a term which appears to be utterly devoid of meaning.

There can be disc displacement without rupture and herniation. Posterior extension of the intact intervertebral disc is an occasional cause of disabling symptoms. This is a true "protruded disc"; consequently, the term "protruded disc," when it is employed to describe a herniated disc condition, is probably not being used accurately.

When the nucleus pulposus flows into the spinal canal, it compresses the nerve roots there. Since the large majority of disc herniations occur in the lumbar (lower back) region, the nerve most often pressed upon is the sciatic nerve, the longest and largest nerve in the body. It is attached to the fourth and fifth lumbar vertebrae and the first, second and third sacral segments, and extends down into the leg. When the nucleus pulposus presses on the sciatic nerve roots, the victim of the herniated disc may feel excruciating pain, often enough to paralyze him temporarily. This pain may be intermittent or fairly steady, and may become even more severe when the condition is aggravated by exertion. The victim may also have numbness, tingling and tenderness along the course of the nerve. Pain *caused by nerve root compression* does not generally occur until some time after herniation; only rarely is the effect immediate. Of course in traumatic rupture or herniation there can be, and generally is, immediate pain from other causes.

Where the disc herniations occur in the cervical region, different nerve roots are pressed upon, causing different symptoms, primarily in the neck and arms instead of in the lower limbs.

After herniation the nucleus pulposus hardens and remains as a definite mass beneath the nerve root. Of course, the intervertebral

4. Kobinski v. George Weston, Ltd., 302 N.Y. 432, 99 N.E.2d 227 (1951).

disc loses its function as a shock absorber and becomes a hazard. The annulus fibrosus, now subjected to forces alien to it, becomes simply a washer resisting direct force. It is then in a position to be ground between the vertebral bodies.

2. *Myelography and Disc Operation*

It is not within the purview of this section of the paper to discuss the clinical methods employed by the doctor in making the diagnosis of herniated intervertebral discs. Nor is there any attempt, at this point, to evaluate the use of myelography in disc diagnosis, either from the medical or the legal viewpoint. Rather, it is our aim here to acquaint the reader with the basic purpose of myelography — the detection of a herniated disc — and with some fundamental myelographic procedures. Our examination of the surgical methods employed in the correction of herniated disc conditions will, of course, be cursory. No layman could reasonably presume to describe difficult surgical procedure.

The ordinary x-ray will not truly show herniation of the intervertebral disc.[5] In order to obtain an x-ray picture that will show herniation of a disc, it is necessary to inject some contrast medium into the back (into the spinal subarachnoid space). The patient is placed on a fluroscopic table and observations are made by the surgeon at that time. X-ray pictures, called "spot films," are also taken for permanent record.[6] If there is disc herniation present the contrast medium fills in and is registered upon the x-ray.

There are four rather well-known types of contrast media used in the myelographic process of disc examination. The ones best known are pantopaque and lipiodol, both of which are iodized oils. Pantopaque is generally considered best because it provides excellent contrast, demonstrates small irregularities, is easy to aspirate (withdraw from the person after use), has minimal aftereffects and minimal evidence after aspiration, and allows the doctor to examine the entire spinal canal. Lipiodol, on the contrary, is difficult to aspirate and is not frequently used today. Air can be used but it shows contrast poorly. Thorotrast, another medium has severe aftereffects, and aspiration is very complicated.[7]

The problem of removing the contrast medium can, on occasion, be a serious one. A bad job of aspiration may cause pain, bleeding and displacement of the needle.[8] "Not infrequently arachnoiditus with its chain of symptoms is seen following the use of an iodized oil in the

5. Compere and Keys, *Roentgenological Studies of the Intervertebral Disc*, 29 AM. J. OF ROENT. 774 (1933).
6. BRADFORD AND SPURLING, THE INTERVERTEBRAL DISC 64-66 (2d ed. 1945).
7. *Id.* at 62.
8. *Id.* at 66.

performance of a myelogram."[9]

Thus it is apparent that the patient might sometimes suffer discomfort from the aftereffects of a myelogram, although such aftereffects are generally not severe.

It is possible for a herniated disc to be present, and yet not show on a myelogram. A laterally displaced disc protrusion might not show; a congenitally short cul-de-sac will not allow the oil column to travel sufficiently to demonstrate a low disc protrusion.[10] However, Haggart and Grannis, in their article, although admitting a 10 per cent error in the diagnosis of disc herniation by pantopaque myelography, strongly recommend its use in cases where low back and sciatic pain are present.[11] Still, as these authors conclude, a positive myelogram is more conclusive than a negative one; although, as Aitken points out,[12] there can be failure to interpret properly the findings of pantopaque myelography even in cases where a finding of herniated disc seems to be indicated.

An article by Knutsson discusses the relatively recent use of a water soluble contrast medium called *abrodil* in myelography.[13] It states the advantages of a water soluble contrast to be: (1) The water soluble contrast is absorbed and thus there need be no aspiration by means of a fresh lumbar puncture as is necessary with all oil media. (2) Sharper pictures are obtained because the contrast medium, being water soluble, mixes freely with the cerebrospinal fluid and so fills up all parts of the dural sac. (3) This medium forces its way into the root sheaths so that they can be judged more thoroughly than in myelography with oil.

The disadvantage in using this contrast medium is that it has an extremely irritating effect, necessitating the administration of a subarachnoid anesthetic. Thus slight headaches can occur as after the administration of any subarachnoid anesthetic.

Lindblom has developed a new method for discovering the presence of disc herniation.[14] This method is called discography. The disc spaces are filled up by injecting dye directly into the center of the disc itself. A normal disc will appear on the discogram in the shape of a collar

9. Aitken, *Rupture of the Intervertebral Disc in Industry*, AM. J. OF SURGERY 267 (Sept., 1952).

10. Haggart and Grannis, *Pantopaque Myelography in Low Back and Sciatic Pain: Indications and Technique*, SURG. CLINICS OF NORTH AMERICA 695 (June, 1952).

11. *Ibid.*

12. Aitken, *Rupture of the Intervertebral Disc in Industry*, AM. J. OF SURGERY 263, 264 (Sept., 1952).

13. Knutsson, *Lumbar Myelography with Water Soluble Contrast in Cases of Disc Prolapse*, 20 ACTA ORTH. SCAND. 294 (1951).

14. Lindblom, *Technique and Results of Diagnostic Disc Puncture and Injection (Discography) in the Lumbar Regions*, 20 ACTA ORTH. SCAND. 315 (1951). For another most informative article on this subject, the reader should see Erlacher, *Nucleography*, J. OF BONE & JOINT SURGERY 34B (May, 1952).

button. There are, of course, varying pictures with faulty discs. This new method for the discovery of herniated discs (discography) might prove useful as a means of obtaining evidence of this condition, both in the medical and the legal sense, where, for some reason (perhaps the physical condition of the patient) the injection of a contrast medium into the spinal subarachnoid space is precluded.

The operation for removal of the herniated nucleus pulposus sometimes is referred to as a lumbar laminectomy. Bradford and Spurling state that a three inch midline incision is centered directly over the suspected disc.[15] When the bulging herniated nucleus pulposus is demonstrated, the root is dissected carefully from the top of the mass.

Rhizotomy, or surgical division (separation and sectioning) of the nerve root compressed by the ruptured disc or the herniated nucleus pulposus, may be indicated, so as to make the root incapable of conducting painful impulses. This protects against pain from fibrotic reaction around the nerve and pain from a recurrent herniation, should it occur.[16]

In removing the herniated nucleus pulposus, it is sometimes necessary to remove some bone from the lumbar vertebrae. Generally, the disc itself is not removed, but rather the herniated nucleus pulposus only, and perhaps the nucleus pulposus remaining in the disc if the rupture of the annulus fibrosus is a large one.[17]

There is much debate among members of the medical profession as to whether fusion is necessary in disc operations. Fusion refers to the process of fusing two vertebrae for the purpose of immobilizing that part of the spinal column involved in the ruptured, herniated disc area. One of the arguments for fusion is that if manual labor is to follow later it must be considered that there would be years of wear on a diseased disc. Some arguments against fusion are that additional degenerative changes which occur may not cause disabling symptoms if the nucleus pulposus has been removed. Also lumbosacral fusion is costly, while convalescence and hospital stay are prolonged.[18]

Sheldon[19] states that the final decision as to whether or not fusion should be made, should be postponed until the time of the operation. Hallock[20] says that if demonstrable mechanical defects are already present between the fourth and fifth lumbar vertebrae, or between the fifth vertebrae and sacrum, fusion should be combined with excision unless the longer combined procedure is rendered inadvisable

15. BRADFORD AND SPURLING, THE INTERVERTEBRAL DISC 88, 91 (2d ed. 1945).
16. *Id.* at 92.
17. *Id.* at 91. The reader should be reminded here that our examination of the operation for herniated intervertebral disc is obviously cursory. No layman is capable of describing difficult surgical procedure.
18. *Id.* at 95, 96.
19. Sheldon, *The False Fear of Disc Surgery*, 34 NEB. ST. MED. J. (Sept., 1949).
20. Hallock, *Fusion Versus Interlaminar Excision Alone in Lumbar Disc Lesions*, 24 N.Y. ST. J. OF MED. 3001 (1952).

because of the condition of the patient. If there is no previous back pain and symptoms are purely nerve root in origin, fusion may be omitted if myelogram fails to reveal any mechanical or degenerative defect or weakening anatomic anomaly.[21]

II.

With a picture in mind of the intervertebral disc as a medical entity, it is possible to proceed with a discussion of some of the various legal and medico-legal problems involving disc injuries in the field of workmen's compensation.

One of the most delicate medico-legal problems in workmen's compensation law arises when the employer or his insurer attempts to discontinue compensation payments to the employee on the ground that the employee has refused to undergo a disc operation for the purpose of reducing his disability.

In *K. Lee Williams Theatres Inc. v. Mickle*,[22] the employer and insurer, in attempting to discontinue payments to the employee, argued that employee's disc injury could be safely operated upon; that operation had been tendered to the employee and refused by him; and, therefore, that the permanence of the employee's disability was dependent solely on the choice of the employee. The extent of the employee's disability was not stated. The court, holding that the employee need not accept the tender of operation, based their decision primarily on the fact that the operation was a major one, with *some* risk of life involved, however slight. The court also stated, but did not emphasize, the fact that operations of this type were not always successful.

In a recent Rhode Island case,[23] the supreme court, in vacating a decree of the superior court requiring the employee to submit to an operation for a "ruptured" disc, held that the advisability of an operation from the medical point of view might be a question of fact as found by the trial justice, but whether or not an employee can be forced to undergo such an operation is a question of law. The court went on to hold that an injured employee, acting reasonably, has the same fundamental and natural right as any other human being to choose whether to submit his body to surgical operation.

It is, then, a question of fact as to whether the employee is reasonable in refusing to submit to a disc operation, and the fact that the

21. Hallock, *supra* note 20, concludes his article with the following philosophical inquiry:

> "To fuse or not to fuse: that is the question:
> Whether tis nobler in the back to chance
> The slings and arrows of outrageous fortune,
> Or to take up arms against a sea of troubles
> And by arthrodesis end them."

22. 201 Okla. 279, 205 P.2d 513 (1949).

23. Mancini v. Superior Court, 82 A.2d 390 (R.I. 1951).

operation may be medically advisable has no bearing upon the reasonableness of the employee's refusal to submit to it.[24]

In *Sultan & Chera Corp. v. Fallas*[25] the court, in refusing to force the employee to submit to an operation for a herniated lumbar disc, relied heavily upon the fact that operative results in such cases are poor.

It can be said with reasonable assurance that courts will refuse to force an employee to submit to a disc operation, usually on the ground that such an operation is uncertain as to ultimate beneficial result; is in some degree dangerous to life and limb; and might involve extraordinary suffering.[26] This is the majority rule in the case of any type of surgical operation where the same risks and uncertainties are involved.[27]

In cases where the employee has refused to allow myelography, the employee generally has not been forced to submit. In *Cranston Print Works v. Pascatore*[28] the court held it error to order a myelogram against the employee's wishes, on the ground that a myelogram is operative in nature, is without curative effect and involves a risk to the health of the employee. The court concluded that a myelogram was not an "examination" to which the employee must submit under the terms of the Rhode Island compensation act.[29]

III.

At this point, after having emphasized the legal approach to one aspect of the intervertebral disc problem, it is appropriate that a discussion of the general medical approach to the problem of intervertebral disc lesions be undertaken.

The lawyer must have an understanding of the medical specialist's

24. In Pruszenski v. Edo Aircraft Corp., 275 App. Div. 1015, 91 N.Y.S.2d 684 (3d Dep't 1949) (cervical disc herniation), the court stated: "Only a question of fact is involved and the evidence indicates that the operation proposed is a serious one which requires the exposure of the spinal cord. While the mortality rate incident to such an operation is said to be only two per cent, it also appears that the possibility of relief amounts to about fifty-seven percent. . . . [I]t cannot be said as a matter of law that the claimant's refusal to submit to the operation is arbitrary and unreasonable." *Id.* at 685.

25. 59 So.2d 535 (Fla. 1952).

26. Sultan and Chera Corp. v. Fallas, 59 So.2d 535 (Fla. 1952); U.S. Coal & Coke Co. v. Lloyd, 305 Ky. 105, 203 S.W.2d 47 (1947); Mancini v. Superior Court, 82 A.2d 390 (R.I. 1951).

27. Melcher v. Drummond Mfg. Co., 312 Ky. 588, 229 S.W.2d 52 (1950); Snooks' Case, 264 Mass. 92, 161 N.E. 892 (1928); Robinson v. Jackson, 116 N.J.L. 476, 184 Atl. 811, 105 A.L.R. 1466 (1936); Steelman v. Justice, 204 Okla. 117, 227 P.2d 647 (1951); Grant v. State Industrial Acc. Comm'n, 102 Ore. 26, 201 Pac. 438 (1921); E. Turgeon Construction Co. v. Andoscia, 89 A.2d 179 (R.I. 1952). But see Tillow v. Daystrom Corp., 273 App. Div. 1046, 78 N.Y.S.2d 720 (3d Dep't 1948) (where all medical testimony was to the effect that the operation contemplated was not one attended with danger to life or health, and was indicated to relieve the disability, then fear alone on the part of the employee does not justify his refusal to undergo the operation).

28. 72 R.I. 471, 53 A.2d 452 (1947).

29. *Accord*, Sultan and Chera Corp. v. Fallas, 59 So.2d 535 (Fla. 1952); Alexander v. Chrysler Motor Parts Corp., 167 Kan. 711, 207 P.2d 1179 (1949).

method of approach to the diagnosis of intervertebral disc lesion and to the treatment of established lesions not only where the issue is whether or not the client must undergo myelography or lumbar laminectomy, but in all medico-legal problems involving intervertebral discs. The lawyer approaches the disc lesion situation with a view to financial recovery for his client, or with the view of preventing such recovery, as the case might be. The doctor is concerned with the problem of adequate diagnosis and proper treatment.

To understand the medical approach, it is necessary to begin by taking a look at a swinging pendulum. Until about 1934, the herniated disc condition was not fully recognized by the medical profession, in the sense that herniated discs had not been definitely segregated as a potential cause of the painful and often disabling conditions they produced.[30] Even after the appearance of Mixter and Barr upon the scene,[31] the medical profession at large was at first reluctant to accept the new diagnosis of herniated intervertebral disc. "But gradually the pendulum has swung the other way until now every patient who has pain in the low back and sciatic pain is suspected of having a protruded intervertebral disc until it is proved otherwise."[32]

The above quotation illustrates a point that more medical experts in the disc field are emphasizing now than any other, and that is that the diagnosis of ruptured, herniated intervertebral disc with root compression cannot be undertaken lightly.[33] In this connection, Aitken in his recent study of the end results of 200 patients operated upon for disc lesions as a result of industrial accidents between the years 1947 and 1949 states as one of his conclusions: "The diagnostic error in this series was 17.5 per cent indicating that the diagnosis of a ruptured disc in the average case cannot be made easily."[34]

It is to be assumed that instances of general practitioners making the diagnosis of herniated intervertebral disc merely on the basis of low back pain and ordinary x-rays showing a narrowing of one of the intervertebral spaces are relatively rare, since certainly there must be at least nerve root compression symptoms before there can be any reason to suspect a lumbar disc lesion.[35]

It is well known that there are other lesions which might cause approximately the same symptoms as herniated disc although most may

30. Young, *Additional Lesions Simulating Protruded Intervertebral Disc,* 17 J. INT. COLLEGE OF SURGEONS 831 (1952).

31. Mixter and Bar, *Rupture of the Intervertebral Disc with Involvement of the Spinal Canal,* 211 NEW ENG. J. OF MED. 210 (1934).

32. Young, *supra* note 30, at 831.

33. BRADFORD AND SPURLING, THE INTERVERTEBRAL DISC 8 (2d ed. 1945); Grant and Nulsen, *Ruptured Intervertebral Discs,* SURG. CLINICS OF NORTH AMERICA 1777 (Dec. 1952); Young, *supra* note 30.

34. Aitken, *supra* note 9, at 267.

35. Grant and Nulsen, *supra* note 33.

be eliminated by ordinary x-ray findings and physical examination.[36] However, it is not suggested that there is no possibility of accuracy in the diagnosis of disc lesions. On the contrary, not only can an accurate diagnosis of the various disc lesions be made, but also, in approximately 75 per cent or more of these cases, it is possible for the medical specialist to locate the specific lesion accurately by clinical findings alone.[37] Rather an attempt has been made here to show that experts in the field of disc lesions do feel that the pendulum, though it has most properly been swinging around from its pre-1934 position, has perhaps swung around too far in the opposite direction. The goal now is rebalance, and the emphasis is on clinical findings.[38]

This emphasis upon the importance of history, symptoms and physical findings naturally looks to a lesser degree of reliance upon the use of myelography. Bradford and Spurling feel that myelography is ordinarily indicated only in those cases which, if verified, are to be operated upon.[39] This seems reasonable in the light of the fact that present medical knowledge is such that the specialist, with experience in the area of clinical analysis can not only make the diagnosis of disc lesion, but can generally locate the specific lesion by his clinical findings alone.[40]

It is interesting to note that Aitken found from his case study that in 144 cases in which myelography was performed, the myelogram gave false readings in 32 per cent of the cases.[41]

Myelograms are probably more heavily relied upon as *legal* evidence of the existence or nonexistence of a disc lesion, than as *medical* evidence to the same effect. It is even to be supposed that many medical experts in the disc field sometimes make use of the myelogram more for the legal benefit of the injured employee than for the purposes of their own diagnosis.

In those situations where the employee refuses to undergo myelography, the doctor's problem of diagnosis and the lawyer's problem of proof of existence of the condition alleged become one, and the case will obviously turn upon the clinical findings of the medical specialist.

From all of the foregoing material, it would seem clear that no absolute presumptions should be indulged in by the trier of fact on the basis of presence or absence of a myelogram.[42] The finders of fact in compensation disc cases should:

(1) Realize that a negative myelogram is by no means presumptive proof that the employee is not suffering from a disc lesion;

36. BRADFORD AND SPURLING, THE INTERVERTEBRAL DISC, 58, 81-85 (2d ed. 1945).
37. *Id.* at 71.
38. *Ibid.*
39. *Id.* at 59. There the authors also list a few exceptions to this general rule.
40. See note 37 *supra.*
41. Aitken, *supra* note 9, at 263.
42. *Ibid.*

(2) Place the greatest weight upon, and give the fullest effect to, the clinical findings of the medical expert *whether or not a myelogram, either positive or negative, is available.*[43]

Of course, weight should be given to myelographic evidence where the myelogram corroborates the clinical findings, but where the two are at variance, the trier of fact should, as does the disc specialist, place less weight upon the myelographic findings and more upon the clinical diagnosis. *A fortiori,* where there is no myelographic evidence, the clinical findings of the medical expert must be controlling. Since clinical diagnosis of a ruptured, herniated intervertebral disc is no easy matter, it would seem that the weight to be given such evidence must depend upon the expertness of the doctors testifying.

A conservative attitude also prevails in regard to the medical approach to surgical treatment of disc lesions. Conservative treatment, consisting perhaps of bed rest, leg traction or manipulation,[44] is advised first in most cases. This is done not for the purpose of avoiding operation where it is necessary, but rather as a safeguard in diagnosing those cases that truly require surgical intervention.[45]

The conservative attitude of the courts, in refusing to order employees to submit to disc operations on the ground that beneficial results are in many cases not obtained,[46] is, in some measure, justified. Aitken in his study of the end results of 200 industrial disc operations concluded that the results of this operation in these industrial cases were poor.[47] It would seem natural that the results would be less rewarding in the industrial cases than in the nonindustrial cases, since the industrial patient who returns to work might be expected to have more subsequent complaints as a result of the labor he performs following operation.

However, Aitken points out that his paper "is not to be construed as a condemnation of the operation for rupture of the intervertebral disc";[48] rather, it appears to be a persuasive argument for the adoption of a more cautious approach to the study of disc lesions with the emphasis on adequate clinical testing, especially by means of conservative treatment, *so that it will be adequately determined whether or not a truly operatable condition exists.*

The author believes that the consensus of expert medical opinion

43. This should hold true, also, of conclusions drawn from clinical findings, including the employee's history as presented to the doctor, where causal relation is the issue.

44. Aitken, *supra* note 9, at 264. The reader who is interested in obtaining an acquaintance with one of the most important procedures employed in conservative treatment might refer to: Judovitch and Nobel, *Intermittent Traction for Herniated Discs,* 80 MED. TIMES 31 (1952).

45. Grant and Nulsen, *supra* note 33.

46. See notes 23, 24 *supra.*

47. See note 9, *supra.*

48. Aitken, *supra* note 9, at 267.

is certainly to the effect that when pain, caused by a clinically determined disc lesion, is so disabling as to actually cripple the patient either socially or economically, operation is advisable. Only one who has, by surgical intervention, obtained relief from the excruciating pain caused by a herniated disc condition can adequately appreciate the skill of the experienced neurological surgeon who performs such operations.[49]

IV.

Most workmen's compensation statutes require that an injury, in order to be compensable, must occur "by accident."[50] The interpretation of the words "by accident" has unfortunately caused the courts more trouble than the legislators who drew the statutes could possibly have foreseen. Since this vexatious question does not extend its dark shadow over disc injuries alone, it will be of value here to discuss the disc cases together with some of the other more important cases, though they may relate to other types of injuries.

The nub of the problem can be illustrated by a comparison of two disc injury cases, *McNeill v. Thompson*[51] and *Purity Biscuit Co. v. Industrial Comm'n.*[52]

In the *Thompson* case, the employee, after painting for four hours, attempted to lift an extension ladder out of a depression in the ground where it was lying. He felt a sudden sharp pain, dropped the ladder and became sick. He was found to be suffering from a "ruptured" disc. The Florida court, in an amazingly brief opinion, two judges dissenting, held that the employee could not recover. They said that when he lifted the ladder he was doing his usual work in the normal physical position. His was a case of "usual exertion" and not an injury "by accident."

In the *Purity Biscuit Company* case, the employee was a truck driver whose job consisted in part of lifting goods which he delivered in his truck. While driving his truck on the day in question, he was seized with violent pain when he raised his foot from the brake pedal. He

49. For a good discussion of the medical approach to the problem of disc lesions, the reader would do well to examine the talk given by Dr. Carl E. Badgley, and his "off-the-cuff" discussion with his audience, following its delivery, at the 37th annual convention of the International Association of Industrial Accident Boards and Commissions, October 2, 1951. The talk, *Diagnostic Conclusions Reached in the Examination of the Painful Back Initiated by Injury*, and the discussion following it, may be found in U.S. Department of Labor, Division of Labor Statistics, Bull. No. 156, *Workmen's Compensation Problems* 23-40 (1951).

50. "By accident" is the usual phrase, and is found in the statutes of thirty states; the term "accidental injury" is employed in the statutes of seven other states. Only the California, Iowa, Massachusetts and Rhode Island acts and the United States Employees' Compensation Act have omitted the requirement altogether. See 1 LARSON, WORKMEN'S COMPENSATION § 37.10 (1952).

51. 53 So.2d 868 (Fla. 1951).

52. 115 Utah 1, 201 P.2d 961 (1949).

was found to be suffering from a "protruded" disc. The Utah court allowed recovery even though the disability was caused by ordinary exertion without unusually heavy labor in excess of the employee's ordinary duties. Wade, J., stated: "There is no requirement in the statute that the accident be the first in the chain of events which ultimately results in injury, or that it be an outward force applied to the employee, all it requires is injury or death by accident."[53]

The court does not attempt to say that the raising of his foot by the employee caused the disc rupture and herniation, but rather that the usual exertion of the employee during the course of his employment was a causative factor in bringing on the ultimate disabling condition.

Wolfe, J., concurring specially, brings us to what is really the heart of the problem when he states: "The commission should have clear and convincing proof that the exertion done as a part of the work, whether ordinary or extraordinary, was a factor which materially contributed to or caused the death or disability."[54]

It is not every disabling condition which arises during working hours for which compensation must be given. There must be definite causal connection between the employee's work and the resulting disability. Thus we see, as one eminent treatise writer in the field has put it: "The basic current problem in this area, then, is not one of accidental character; it is the extremely difficult medico-legal question of causation."[55]

As the Utah court points out, an acceptance of the "usual" and "unusual" exertion distinction would invite niceties of distinction that would soon completely obscure any possible light that could be brought to bear on the "by accident" problem. Would usualness or unusualness depend, for example, upon the number of cartons lifted by an employee in one day? If the usual number were one hundred, would one hundred and ten be unusual exertion? One hundred and fifty? The employee will lift little cartons, bigger cartons and biggest cartons, each carton of each class containing different weights on different days of different weeks, and so forth.

The criticism by Latıner, J., in his dissent, that the line of reasoning of the majority "opens the flood gates and every internal failure becomes an accident because it happens. . . ."[56] hardly seems valid where the true test of compensability is causal relation.

To be sure, the question of whether or not lifting one's foot from a brake pedal can materially contribute to the ultimate disability resulting from a herniated disc is not a question free from doubt, but

53. *Id.* at 966.
54. *Id.* at 971.
55. 1 LARSON, WORKMEN'S COMPENSATION 567 (1952).
56. Purity Biscuit Co. v. Industrial Comm'n, 115 Utah 1, 201 P.2d 961, 975 (1949).

that is not, in essence, the main problem here. It is the problem of deciding whether or not it is wise to avoid the medico-legal difficulties involved in reaching a just solution, by formulating a mass of nice legalistic distinctions based upon the concept of usual, or unusual, exertion.

The artificiality of the *McNeill* decision[57] based upon this very concept is apparent when we realize that if the employee had merely been in an awkward, perhaps twisted, position when he attempted to lift the ladder, his injury might have been compensable.

It is no answer for those courts who would adopt the unusual-exertion theory to say that in many of these disc cases degeneration of the annulus fibrosus had begun sometime before the alleged injury took place. The law does not require that an injury to be compensable must be entirely attributable to the employee's work; such work need only be a contributing cause. One of the fundamental rules in workmen's compensation law is that the employer takes the employee as he finds him.[58] Moreover, it is manifestly unjust, where an employee performs the same type of labor day after day, over a period of time — labor which might easily be the material causative factor in the development of the degenerative process in the annulus fibrosus (in the case of disc injuries) — to deny such employee compensation for his disability on the ground that the day the disability manifested itself, he was performing his usual work with only the usual amount of exertion.[59]

The conflict in this area of workmen's compensation law reached a climax recently in New Jersey with the decision following the re-argument in *Neylon v. Ford Motor Company*.[60]

To understand that case fully, it is desirable to begin with the earlier case of *Mills v. Monte Christi Corp.*[61] There, the employee, while working in a company office, was asked by a female co-employee to pick up a five gallon bottle of water and place it in a drinking fountain. While attempting to pick it up, the employee felt a snap in his back, accompanied by terrific back pain. He was later found to be suffering from

57. McNeill v. Thompson, 53 So.2d 868 (Fla. 1951).

58. Weakley v. Cook, 249 P.2d 926 (Mont. 1952); HOROVITZ, WORKMEN'S COMPENSATION 82, 83 (1944); 1 LARSON, WORKMEN'S COMPENSATION § 12.20 (1952). For an interesting sidelight on this issue, covering one solution employers are attempting to formulate in this area, see Colcher and Hursh, *Pre-Employment Low-back X-ray Survey*, 21 INDUSTRIAL MED. & SURG. 319 (1952).

59. There are cases allowing recovery on the specific ground of wear and tear over a period of time. See Stokes v. Miller, 50 So.2d 509 (La. App. 1951) (bulldozer operator — herniated disc from continued jarring — previously congenitally weak back immaterial); Caddy v. R. Maturi & Co., 217 Minn. 207, 14 N.W.2d 393 (1944) (taxi driver — herniated disc as a result of repeated jarrings).

60. 10 N.J. 325, 91 A.2d 569 (1952).

61. 10 N.J. Super. 162, 76 A.2d 839 (1950).

a herniated intervertebral disc. The court, in allowing an award of compensation to stand, stated:

> "The specific incident of December fifth was an unlooked-for mishap or untoward event which was not expected or designed and constitutes an accident within the liberal intendment of the act . . . the fact that the strain or exertion which brought on the herniation was not an unusual one, or that the employee was predisposed thereto, is no ground for denial of an award."[62]

The court distinguished the "heart cases" on the ground that where conditions unrelated to trauma are concerned the reasoning might be different, and went on to say:

> "The medical testimony disclosed that the herniation of a disc ordinarily results from trauma or particular effort. This, *coupled with the evidence relating to the incident of December fifth, was sufficient to support the finding that the petitioner's physical action at that time brought on his back injury and present disability.* . . . The suggested introduction of an artificial requirement that there be a showing in any of these instances of unusual or extraordinary strain or exertion finds no basis in the terms of the Act and would appear to be contrary to its underlying beneficent purposes."[63]

Then, almost two years later came the first argument before the New Jersey Supreme Court of *Neylon v. Ford Motor Company*.[64] There the employee had suffered a sacroiliac sprain while unloading car seat frames of 10 or 15 pounds weight from a freight car. This was the same type of work the employee had been doing for six or seven months prior to the injury. On the particular day in question he felt sudden, sharp pain and was seen by the company physician. The superior court sustained an award of compensation.[65] The supreme court reversed, with Heher, J., and Vanderbilt, C. J., dissenting, holding that an accident to be compensable must be an event beyond the mere employment, and that the injury must have been a result of the accident and not itself the accident. Case, J., for the majority further stated that it was necessary for the claimant to prove an unusual strain or an unusual exertion or some condition unusual in the employment in order to show an "accident" within the meaning of the compensation law. The *Mills* case was expressly overruled.

Heher, J., in his dissent, pointed out that the critical inquiry was whether or not the danger was one to which the employee was exposed because of the nature of his employment. If so, the accident was in the statutory class. He went on to say:

62. *Id.* at 841.
63. *Id.* at 842 (italics added).
64. 8 N.J. 586, 86 A.2d 577 (1952).
65. Neylon v. Ford Motor Co., 13 N.J. Super. 56, 80 A.2d 235 (1951).

> "In seeking for the legislative intent, we should take care not to enter the realm of the abstruse and the metaphysical. The lawgivers have used the word 'accident in its popular and ordinary sense . . .' an unlooked-for mishap or untoward event which is not expected or designed."[66]

Case, J., was later replaced on the bench by Jacobs, J., who had delivered the opinion for the majority in the *Mills* case. A re-argument was granted by the court and, per curiam, the judgment of the superior court allowing compensation[67] was affirmed by an equally divided court.[68] The court said:

> "At the oral argument it was not seriously disputed that an award would have been proper, without any showing of unusual strain or exertion, if the plaintiff had suffered a common fracture, dislocation or similar injury . . . it seems clear that no basis exists for differentiating such injuries from his sacroiliac sprain."[69]

Thus the present state of the law in New Jersey is to the effect that no unusual exertion is required for an injury to be accidental within the meaning of the compensation statute. Whether or not one is happy with the court's definition of the word accident as any unlooked-for mishap or untoward event which is not expected or designed,[70] the fact is that in essence the New Jersey court today is not so much concerned with the problem of accidental character as with the medico-legal problem of causation.

A discussion of the particular problems in this area presented by the so-called "heart cases" is beyond the scope of this paper, as is any attempt at delineation of the various theories of approach used by the courts in every type of injury which concerns the "by accident" clauses.[71] However, one conclusion may be drawn as to *all* of these cases. It is that the unusual-exertion rule should be abolished in its entirety, as should all distinctions based upon any purely legalistic conception of the word "accident." The problem in this field is not a legal one alone; it is essentially medico-legal, and the reasoning that should be applied at all times is that which looks to causation as the basis for decision. The problem is mainly in the fact-finding area, not in the area of the appellate court.

Medico-legal problems of causation can, on occasion, be extremely difficult ones, requiring a great deal of thought and effort on the part of attorneys and fact-finders alike if they are to be resolved properly; but the law has never been a refuge for the lackadaisical, and problems

66. Neylon v. Ford Motor Co., 8 N.J. 586, 86 A.2d 577, 582 (1952).
67. See note 65 *supra.*
68. See note 60 *supra.*
69. Neylon v. Ford Motor Co., 10 N.J. 325, 91 A.2d 569, 570 (1952).
70. See 1 LARSON, WORKMEN'S COMPENSATION § 38.62 (1952).
71. *Id.* §§ 37, 38.

difficult of solution are never solved by the alternative adoption of legal distinctions so nice as to turn upon the degree of convexity of the spine at the moment of injury, or the angle of the ankle at the moment of impact. Legalistic interpretations of the degree of exertion or the unusualness of bodily position are no answer to this problem.

It would be unjust to allow an employee or his dependents to be compensated for injury or death merely because injury or death took place during the employee's working hours, but where the only issue in the case is the "by accident" provision of the act involved, the question of whether the employee became disabled or died through ordinary exertion — and, incidentally, the question of whether or not the same result could easily have taken place outside of the employee's working hours in the same way it did at work — is immaterial. The issue is not one of interpretation of words; rather, it is a question for the finder of fact, who is generally expert at these matters through years of experience, as to whether or not the work the employee was doing for his employer could be said, medically, to have caused or contributed to cause the employee's disability or death. If such causal relationship is found, then the injury in reality occurred "by accident" and the employee or his dependents should be allowed to recover.[72]

Before leaving this class of cases, it should be pointed out that the injury cases involving wear and tear over a period of time present a somewhat different aspect of the causation problem. Where, in the disc cases, the wear and tear on the annulus fibrosus (disc degeneration) takes place over an extended period of time, causing eventual rupture and subsequent herniation of the nucleus pulposus, then the problem of proving causation in relation to the work performed by the employee on the particular day that the disability first manifested itself could be extremely difficult, and, perhaps in some cases, impossible.

Yet to deny recovery on the ground that on the particular day that severe nerve root compression symptoms manifested themselves —

72. Industrial Comm'n v. Corwin Hospital, 250 P.2d 135 (Colo. 1952) (nurse contracts polio while performing usual duties in polio ward); Gray's Hatchery & Poultry Farms, Inc. v. Stevens, 81 A.2d 322 (Del. 1950) ("ruptured" intervertebral disc); United States Coal & Coke v. Parsons, 245 S.W.2d 442 (Ky. 1951) (herniated disc); Rivero v. Leaveau, 45 So.2d 418 (La. App. 1950) (herniated disc); Lorine Walters v. Ernest Hagianis, 87 A.2d 154 (N.H. 1952) (aggravation of pre-existing pelvic disease); Rosenberg v. Netherland Cab Co., 269 App. Div. 914, 57 N.Y.S.2d 551 (3d Dep't 1945) (herniated disc); Edwards v. Piedmont Pub. Co., 277 N.C. 184, 41 S.E.2d 592 (1947) ("ruptured" intervertebral disc); Larson, *The Future of Workmen's Compensation*, 6 NACCA L.J. 18, 37-38 (1950). For a rather interesting illustration of the fact that even in those jurisdictions that seem to adhere to the "unusual exertion" rule, the real issue is causation, see Caled Products, Inc. v. Sausser, 86 A.2d 904, 905 (Md. 1952). In this case, recovery for a disc injury was denied because of lack of showing of "unusual strain or exertion" of the employee or some "unusual condition in the employment." However, the court relied heavily, in coming to their decision, on the fact that all of the medical testimony was to the effect that there was no causal connection between the disc injury and the employee's work.

dramatically perhaps — the employee's work was not, in and of itself, such as to have contributed towards causing rupture or herniation would be unjust where it could be shown, by adequate medical evidence, that the employee's daily work was a material factor in producing gradual disc degeneration over a more or less definite period of time. In such situations the rules of law allowing recovery for gradual injury should apply on the ground that the injury was one so definite in time as to be accidental in nature since either the precipitating incident, or the manifestation of disability (generally disabling pain resulting from nerve root compression) is almost invariably of a sudden or reasonably brief character.[73]

V.

Another perplexing medico-legal question involving disc injuries as well as other injuries of various types, is one which might best be labelled the problem of successive insurers.

The ordinary situation giving rise to this problem might best be illustrated by this hypothetical: *A*, while employed by *B*, who is insured under the workmen's compensation law by *C*, suffers a compensable injury. He is paid by *C* for some time, and then he goes to work for *D*. Then *A*, while working for *D*, again becomes disabled. *D* is insured by *E*. Who is to pay *A* now? Should *C* still be liable, or is the new insurer liable because he had insured the risk at the date *A*'s second period of disability began?

The answer depends upon whether or not there was any causal relation between *A*'s employment with *D* and *A*'s last disability. If *A*'s last disability was in no way brought about by his employment with *D*, but rather was a complete carry-over from the injury he received while in the employ of *B*, then it seems clear that *C*, *B*'s insurer, should be liable for the second disability just as he was for the first.

It should be obvious to the reader that we are involved here with questions of causal relation — the relationship of each particular employment to each particular disability — and, as such, we are concerned more with questions of facts than with rules of law. However, there are two rules of law applied to fact situations in this area which must be understood before the factual problems involved can have any meaning.

1. *The Massachusetts-Michigan Rule*

In *Rock's Case*[74] the employee suffered a back strain while working for *A*. He was out of work for a time and *A*'s insurer, *X*, paid disability

73. See note 59 *supra; cf.* Purity Baking Co. v. Industrial Comm'n, 115 Utah 1, 201 P.2d 961 (1949); 1 LARSON, WORKMEN'S COMPENSATION § 39.10 (1952), and cases cited therein.

74. 323 Mass. 428, 82 N.E.2d 616 (1948).

compensation. The employee then went to work for *B*, who was insured by *Y*. He again suffered a back strain, and had subsequent disability. The Industrial Accident Board found that the second incident (lifting a barrel), occurring while employee was in the employ of *B*, was in no way a contributing cause of employee's subsequent disability. The court held the first insurer, *X*, liable for the subsequent disability.[75]

In such cases, where it is found that the second incident was in no degree responsible for the subsequent disability, there is no difficulty in relieving the second insurer of liability, and holding the first insurer totally liable. The real problem arises when the second incident is found to have aggravated the pre-existing condition.

In *Borstel's Case*[76] the employee suffered three successive injuries in the same place in his back. A new insurer was on the risk at the time of the third injury. The new insurer was held liable to the employee for the third disability, the court stating:

> "The later insurer must pay the compensation if there was any causal relation between the injury of September 13, 1948 [date of third injury], and the subsequent total disability, even though the earlier injuries were also contributing causes."[77]

Thus, under the Massachusetts-Michigan rule, the insurer on the risk at the time of the last injury is liable for all of the compensation for an incapacity following that injury, even though the earlier injury or injuries were contributing causes. There is no apportionment under this rule, even though the earlier injury may have been the *major contributing cause*.[78] All that is necessary to hold the second insurer completely liable is a finding that the incident which took place while that insurer was on the risk was causally related to the subsequent incapacity.[79]

2. *The New York Rule*

Under this rule, if the second incident is in no way a contributing cause of the subsequent disability, the first insurer is still liable, just as under the Massachusetts rule. But where both injuries are contributing factors to the ultimate disability, there is apportionment between insurers.

In *Anderson v. Babcock & Wilcox Co.*,[80] the employee suffered a fracture of the ischium (hip) bone while in the employ of *X*. There was a

75. *Cf.* Wentworth's Case, 284 Mass. 479, 188 N.E. 237 (1933).
76. 307 Mass. 24, 29 N.E.2d 130 (1940).
77. 29 N.E.2d at 130.
78. Morin's Case, 321 Mass. 310, 73 N.E.2d 467 (1947); Blanco's Case, 308 Mass. 574, 33 N.E.2d 313 (1941).
79. Brinkert v. Kalamazoo Vegetable Parchment Co., 297 Mich. 611, 298 N.W. 301 (1941) (re-injury of lumbar vertebrae fusion).
80. 256 N.Y. 146, 175 N.E. 654 (1931).

partial healing of the fracture. Employee then went to work for the defendant and suffered a traumatic break of the partially united bone in the course of his employment. The court stated:

> "On the evidence the present disability exists by reason of the two accidents, and the compensation should be equally apportioned between the two insurers. Unjust it is that the second insurer should bear the entire liability when the second accident was related in large measure to the first. No less unjust it is that the first insurer should bear the entire liability if it appears that without the second accident an earlier recovery might have been had."[81]

Though this New York rule may in theory be more just than the Massachusetts-Michigan rule, it is questionable whether the ideal of justice can really be reached under it. There may be several insurers involved in any one case, and the problem of apportionment could be extremely troublesome. The liability could be apportioned equally among all insurers, but it would be a remarkable coincidence if that should turn out to be the true apportionment ratio. And it hardly solves the problem to reverse the fact-finder's determination of apportionment and send the case back without any real guide as to what the proper ratio should be.[82]

The Massachusetts rule appears to be the more practical of the two, and not really unjust when one realizes that aggravation of a pre-existing condition precipitating compensable disability has always been grounds for liability.

It is essential to remember that even under the New York rule, apportionment is not allowed merely because the employee has twice become disabled, each time under a different insurer. There must be a causal relation between the second disability and the employment giving rise to it.[83]

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81. Anderson v. Babcock & Wilcox Co., 256 N.Y. 146, 175 N.E. 654, 655 (1931). *Accord*, Zuk v. McGuire Bros., Inc., 277 App. Div. 956, 99 N.Y.S.2d 617 (3d Dep't 1950); Employers' Casualty Co. v. United States Fidelity and Guarantee Co., 214 Ark. 40, 214 S.W.2d 774 (1948); Walker v. Hogue, 67 Idaho 484, 185 P.2d 708 (1947); Peniston v. City of Marshall, 192 Minn. 132, 255 N.W. 860 (1934). It should be noted that this type of apportionment bears no relation to an insurer's liability for disability resulting from aggravation of a pre-existing weakness. There is apportionment between two insurers for the total result of two or more successive injuries, but there is still no apportionment between the nonindustrial weakness the employee takes with him to his job, and the ultimate disability resulting from a combination of this pre-existing weakness plus industrial aggravation. Schurick v. Bayer Co., 272 N.Y. 217, 5 N.E.2d 713 (1936). And see note 58 *supra*.

82. Fireman's Fund Indemnity Co. v. State Industrial Acc. Comm'n, 250 P.2d 148 (Cal. 1952).

83. Kobinski v. George Weston, Ltd., 302 N.Y. 432, 99 N.E.2d 227 (1951); Merton Lumber Co. v. Industrial Comm'n, 260 Wis. 109, 50 N.W.2d 42 (1951). And the apportionment rule does not apply in the case of occupational diseases. In such cases, the disablement is thought of as being the happening of the accident. The insurer on the risk at the time the ultimate disability manifests itself is totally liable despite the fact that previous exposure may have con-

It is at this point that we pass from rules of law into the realm of the fact-finder. The general proposition is that any finding on the issue of causal relation by the compensation board or commission is binding upon the reviewing court. Of course, no such finding may be based upon mere conjecture or speculation, but if there is any evidence to sustain that finding the reviewing court will not disturb it.[84] For the purpose of reminding the attorney of the task that he must face up to in this area, the above stated rule of law, as fundamental and well-known as it is, cannot be emphasized too heavily.

There are, of course, some rule-of-law problems that must be considered even in this area.[85] The "by accident" requirement, if interpreted to mean that there must be unusual exertion before there can be a compensable injury,[86] could prevent apportionment on a set of facts which would support a decision for apportionment in a state not adopting that theory.[87] But it is not our purpose to review the unusual-exertion theory again here; the previous discussion should suffice on this point.[88] Rather, it is our purpose, bearing in mind the legal rules that will be applied to a given decision of the fact finder, to approach directly the issues that might be raised in successive insurer litigation involving herniated intervertebral discs.

(1) Where disability follows a second incident, then the second insurer should be liable, if the employee's condition, previous to this second incident, had not so far progressed as to be recognizable as a herniated intervertebral disc.

From the legal point of view, if herniated disc symptoms had not yet become manifest, then, where the employee's work could be shown to be of the kind that could hasten the ultimate disability by means of aggravation of the pre-existing condition, the insurer on the risk at the time of the aggravation should not be able to escape liability by showing that, in all probability, the disability might eventually have manifested itself in the ordinary course of events, regardless of the

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tributed to the ultimate result. Russo v. Despatch Shops, Inc., 116 N.Y.S.2d 788 (3d Dep't App. Div. 1952); 2 LARSON, WORKMEN'S COMPENSATION § 95.32 (1952).

84. "This statement is, without any close competition, the number-one cliche of compensation law, and occurs in some form in the first paragraph of compensation opinions almost as a matter of course. . . . Citations for this truism are omitted here; a complete list would run to hundreds of cases." 2 LARSON, WORKMEN'S COMPENSATION 318 (1952).

85. Problems of evidence involving admissibility and the like are obviously not within the scope of this paper. Nothing herein is meant to bear any relation to them.

86. See § IV *supra.*

87. *Compare* Kobinski v. George Weston, Ltd., 302 N.Y. 432, 99 N.E.2d 227 (1951) (no apportionment for a herniated disc), *with* Employer's Casualty Co. v. United States Fidelity & Guarantee Co., 214 Ark. 40, 214 S.W.2d 774 (1948) (apportionment allowed for a herniated disc).

88. See note 86 *supra.*

employee's subsequent activity.[89] The law requires only that the employment contribute to the ultimate disability, not that it initiate it.[90]

Under the apportionment rule, the first insurer might very well be ordered to pay a larger percentage of the compensation due the employee if the original incident were shown to be of such serious character that it probably produced rupture and herniation. But although it might be pointed out medically that, once herniation takes place, it is more or less inevitable that disabling symptoms will occur eventually under any circumstances, as a legal matter all that should be required is that there be some causal connection between the employee's work and the ultimate result.

From a layman's point of view, it would also appear to be rather difficult, where herniated disc symptoms do not appear before the second incident, to state decisively that a first trauma did actually cause rupture and herniation.

(2) If it can be shown that herniated disc symptoms were present following the first trauma, then a subsequent disability, even in the wake of the second demonstrable incident, should not be the responsibility of the second insurer. The first insurer should remain liable.

Once an injury has progressed so far as to manifest itself in definitive form, it is difficult, if not impossible, to see how, legally, a second incident could be held to be a contributing cause merely because it was followed by disability. In such a case (where nerve root compression was already demonstrable, for example), the insurer on the risk at the time of the second disability should not be held solely liable for, nor should he be made to contribute to, compensation payments to the employee. However, it is possible that an employee, with a herniated disc, could, as a result of further exertion, incur a further back injury (superimposed) which might or might not be traceable to an instability of the back occasioned by the herniated disc. In that case, under the New York rule there would have to be apportionment, while under the Massachusetts-Michigan rule the second insurer would seemingly be liable for the complete disability.[91]

It is to be supposed that the situations discussed in (2) above could arise fairly often, since there are employees who refuse to be operated upon for herniated disc conditions, who will, presumably, keep working despite pain and discomfort.

The above discussion does not begin to exhaust all of the possible situations involving disc injuries that might arise in successive-

89. Employer's Casualty Co. v. United States Fidelity & Guarantee Co., 214 Ark. 40, 214 S.W.2d 774 (1948).

90. See note 58 *supra*.

91. *Cf.* Morin's Case, 321 Mass. 310, 73 N.E.2d 467 (1947).

insurer litigation. However, it should at least give the reader an inkling of what the general problems are in this area.[92]

CONCLUSION

It is necessary for the workmen's compensation lawyer to have a comprehensive and intelligent understanding of the field of intervertebral discs. He must have a knowledge of the intervertebral disc as a medical entity, and, most important, he must understand the doctor's approach to the problems occasioned by intervertebral disc lesions. In this way only will he be able to do the best possible job for his client in intervertebral disc litigation.

By thoroughly understanding the medical aspects of his subject, the lawyer is in a better position to appreciate the legal problems involved, and thus he is better equipped to help shape the law to the ends of justice.

92. It is fitting to remark, at this point, that the reader should not be misled by the seeming all-inclusiveness of the title of this paper. It could more accurately read: *Some of the Problems Concerning Intervertebral Disc Injuries in Workmen's Compensation.* It should be apparent, that is, that only some of the more important aspects of this general problem have been considered herein.