THE CHIROPRACTIC REPORT

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The Chiropractor as an Expert Witness

A. Introduction

1. In the settlement of a recent California whiplash case the plaintiff received an additional $40,000 in general damages because of chiropractic evidence – fluoroscopic video x-ray showing permanent laxity in the posterior longitudinal ligament in the cervical spine. The plaintiff, a young woman, had excessive cervical range of motion that would likely lead to early degeneration and future disability.[1]

2. In *Primeau v Giosa,* a 1975 Canadian case, the plaintiff had suffered a whiplash injury in a motor vehicle accident and the medical evidence given was that his injuries "were not at all serious", he had "virtually recovered", and that the alleged back problems at date of trial were "not connected with the accident". Disagreeing, and awarding substantial damages, the trial judge stated:

"Having closely observed the manner and demeanour of the plaintiff as he gave his evidence in a frank, straightforward, unequivocal, detailed and consistent manner - unshaken by a persistent, searching cross-examination, I accept his evidence in its entirety. I find that the pain, discomfort and disabilities he described are real and are attributable to the injury he received in the collision. I accept the medical evidence with the exception that, where it is at variance with the evidence of the chiropractor, I accept the evidence of the chiropractor and, more particularly, his prognosis."

On appeal by the defendant the trial judge's decision was upheld.[2]

3. However it is still the exception for chiropractic evidence to be preferred to medical evidence. In some jurisdictions there remain cases, mostly avoidable if the lawyer calling the chiropractor had properly qualified him/her as an expert, where a chiropractic witness is not admitted as an expert.

This report looks at the general principles of expert evidence, areas in which a chiropractor is potentially the best expert to call, and matters that are important to increased recognition and successful use of chiropractic evidence.

B. General Principles

4. The basic legal principles concerning expert evidence are universal. The first is that expert evidence is an exception to the fundamental rule that witnesses cannot give *opinion evidence,* their judgement of events. They can only speak of what they have observed and done, the *facts*. Opinions from experts are allowed where subject matter is technical, and, in the words of an old English case, "inexperienced persons are unlikely to prove capable of forming a correct judgement upon it without assistance."[3]

Skill and Admissability

5. An expert is anyone the court accepts as having *skill* on the issues upon which he/she is testifying. No one is an expert in general terms – most people are expert in some area. Skill is assessed on both training and practical experience. Experience has particular weight. There is nothing special in a university degree, and in many cases academic qualifications alone have been held insufficient. Anyone with appropriate skill can testify as an expert on health care matters.

6. These principles are illustrated in a drunk driving case where the prosecution called a police officer as an expert witness on the effect upon the defendant of a given blood alcohol ratio as determined by a measuring device. Defendant's counsel objected that an opinion on the physiological effects of different blood alcohol quantities could only be given by a duly qualified medical practitioner. The judge disagreed, admitted the police officer's testimony as expert evidence and summarized the law thus:

"The test of expertness, so far as the law of evidence is concerned, is skill, and skill alone, in the field in which it is sought to have the witness's opinion. If the court is satisfied that the witness is sufficiently skilled in this respect for his opinion to be received, then his opinion is 'admissible' ... *A skilled person is one who has, by dint of training and practice, acquired a good knowledge of the science or art concerning which his opinion is sought, and the practical ability to use his judgement in that science."*[4]

Qualifying the witness

7. An expert must not only have skill, but this must be conveyed to and accepted by the court when the expert is called. This initial process, called qualifying the expert, is the responsibility of the attorney/lawyer calling the witness. It is particularly

Professional Notes:

Weekend Manipulation for MDs

What's with these Australians? Four years ago the Australian Family Physician produced a correspondence course in manipulation for MDs. The Australian Medical Association ran for cover, disassociating itself from such irresponsibility. All authorities (chiropractic, medical, PT, and independent government studies) agree an MD requires a minimum of one year formal fulltime postgraduate study to be competent to enter unsupervised practice of manipulation.

Apparently egg only sticks on the face a short while. John Murtagh MD, Medical Editor, who has otherwise done an excellent job in revamping the Australian Family Physician, is now advertising and leading single weekend courses entitled 'Back Pain and Spinal Manipulation for Doctors'. Endorsed, if you believe it, by the Royal Australian College of General Practitioners. (Australian Family Physician (1989) 18(1):51). After three days what will these hapless MDs know of:

- The various planes of motion of the vertebral joint, let alone coupled movements.
- How to begin to assess joint restriction intelligently – palpation alone is a skill acquired over hundreds of hours.
- What techniques are most effective for each type of dysfunction, let alone how to use them.
- How to test for contra-indications through x-ray analysis, provocative tests, and history.

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important with respect to chiropractic expert evidence since many lawyers and judges have little understanding of current levels of chiropractic education, research, practice, and expertise.

Qualifying an expert witness involves questions, when the expert is first called to give evidence, establishing his/her level of training, experience, and expertise relevant to the issue involved.

Weight of Evidence

8. Qualifying the witness well is particularly important because most cases, by definition, involve a conflict of expert evidence. This means there are two hurdles – having evidence admitted as expert (relatively easy), but then persuading the court to place sufficient *weight* on the evidence to prefer it to any expert evidence called by the other side.

Take the example of a whiplash case with no bone fracture but soft tissue injuries, where the opposing witnesses are a chiropractor and an orthopaedic surgeon. If the chiropractor is not qualified well as an expert witness by the lawyer calling him/her, the orthopaedic surgeon's evidence is likely to receive a more sympathetic hearing, be given more weight, and preferred. However, if in qualifying his chiropractic witness, and cross-examining the orthopaedic surgeon when he/she is being qualified, counsel shows:

a) The orthopaedic surgeon has little or no formal training in the detection of joint dysfunction and other soft tissue injuries, has only published and practised in the area of bone pathology (maybe only in the lumbar spine), and rarely treats a patient such as the plaintiff in his/her practice; and that

b) The chiropractor not only has more relevant formal training, but has been in practice 10 years and sees new patients with this type of injury on an almost daily basis – he/she is managing 50 similar cases at any given time;

then the judge will be disposed to give good weight to the chiropractic expert evidence. If this evidence is then given convincingly it may well be preferred to competing medical (or other chiropractic) evidence.

C. Chiropractic Field of Expertise

9. Litigation and third party compensation schemes frequently involve low-back and cervical spine strain/sprain injuries where there is no bone injury or other pathology evident on x-ray. 90% of these injuries are labelled 'non-specific' by medicine, tacit acceptance that no specific diagnosis or opinion can be given.

Because standard medical methods of orthopaedic examination reveal no physical cause for the pain and disability, medical expert evidence is that none exists. When symptoms fail to resolve following rest and medication, persistent pain is explained away in psychosomatic terms ("psychogenic", "chronic anxiety depression") – and frequently viewed as causally unrelated to the accident, and thus not compensable. (See para 10 for a typical example).

This, as the legal profession is now becoming aware, is a potent area for the use of chiropractic expert evidence. Chiropractic training and diagnostic techniques frequently discover a real physical basis for disability – joint and muscle dysfunction (pathophysiology) only capable of precise confirmation by skilled methods of palpation not taught in formal medical education at any level. Some prominent medical researchers, especially those working with chiropractors, recognize this important field of expertise beyond their training.[5,6]

From a legal point of view the most important expertise of chiropractors relates to these aspects of dysfunction in joints and associated muscle groups:

a) Diagnosis – although there can be corroboration of joint dysfunction from x-ray, it can only be confirmed by palpation skills fundamental to chiropractic training and practice but not taught in any medical school and still rarely understood and used by MDs.

b) Analysis of complicating factors, such as prior injury, stenosis, work postures, and other biomechanical factors.

c) What can be achieved by joint manipulation, specific exercise, and other rational management directed at the cause (dysfunction or pathophysiology) rather than the symptoms.

d) Prognosis, including prospects of early degeneration and future pain and disability.

A major judicial government inquiry into chiropractic in New Zealand in 1979 held that chiropractors "carry out diagnosis and therapy of spinal biomechanical disorders at a sophisticated and refined level" and that chiropractors were "the only health practitioners who are necessarily equipped by their education and training to carry out spinal manual therapy."[7] Ten years later there is an even stronger case for these findings.

10. These points can be illustrated from the recent case of *Behnke v Barthorpe and Walker*[8] where:

a) The plaintiff, a middle-aged woman, had been thrown through the front window in a motor vehicle accident. She received a number of head and spinal injuries and, after brief hospitalization, sought medical care.

b) Her family practitioner, who was also a qualified orthopaedic surgeon, could find no physical basis for her continuing headaches, back pain, and lethargy after a period of months. She was referred to an internist who found nothing, then a psychologist and finally a psychiatrist. The defense medical reports from these specialists concluded that the plaintiff's problems were purely psychological – 'chronic anxiety depression'.

c) The plaintiff, however, filed a report from the chiropractor she had consulted some two years after the accident. In sharp contrast to the medical testimony that there was no neurological or physical basis for the plaintiff's persistent headaches, back strain and hip pain the chiropractor reported:

- Gross restriction of cervical motion (palpable dysfunction at the 1st, 2nd, 5th and 6th vertebrae and marked bilateral hypertonicity and increased pain sensitivity of the posterior cervical muscles).
- Gross dysfunction throughout the thoracic and lumbar spine (with specific muscular and neurological involvement as described).

He then documented major improvement in the plaintiff's condition over 18 months, using specific joint adjustment (manipulation) and transcutaneous electrical nerve stimulation (TENS).

d) Given this conflict of evidence the matter went to trial. Oral testimony was given by the family physician/orthopaedic specialist, psychologist and psychiatrist for the defense, by the chiropractor for the plaintiff. The judge expressly preferred the evidence of the chiropractor to that of the medical experts, rejected the suggestion that the basis of the patient's suffering was psychological, and awarded general damages of $22,000.

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The Distinction Between Manipulation and Mobilization

1. Most techniques of chiropractic joint adjustment are specific manipulations, some are mobilization. The distinction is often blurred in medical practice. A number of medical trials of manipulation, including the often quoted ones by Sims-Williams et al[1] and Doran and Newell[2] reported in the British Medical Journal, used techniques of mobilization and manipulation interchangeably and indiscriminately.

The concepts of 'manipulation' and 'mobilization' are of course quite distinct, and recent research emphasizes the importance of this distinction.

Definitions

2. Cassidy DC describes the "four zones distinguished in joint adjustment"[3] as:

a) Active movement – the range of joint movement the patient can achieve himself/herself.

b) Passive movement – the additional range of movement that can be achieved by the chiropractor through palpating the joint.

c) Paraphysiological zone – the zone after the end point of passive movement but before the point of injury (or 'the limit of anatomical integrity').

d) Pathological zone – movement that damages the joint capsule and associated ligaments.

3. 'Mobilization' describes techniques that remain within the passive range of joint motion. The practitioner is aware of the elastic barrier of resistance at the end of this passive range, and does not take the joint beyond it. Most physiotherapists who practice manual therapy use 'mobilization'. Their leaders, such as Maitland, warn against attempting 'manipulation' without very extensive postgraduate education.[4]

'Manipulation' takes the joint through the elastic barrier to the paraphysiological zone or space. It necessarily involves speed to 'crack the barrier' but, when skillfully applied, this is over a small range of movement (similar to the movement when cracking a finger joint) and often with little force. A skilled adjuster can manipulate a joint with much less force than an unskilled therapist uses in mobilization.

These differences between mobilization and manipulation are illustrated in Figure 1.

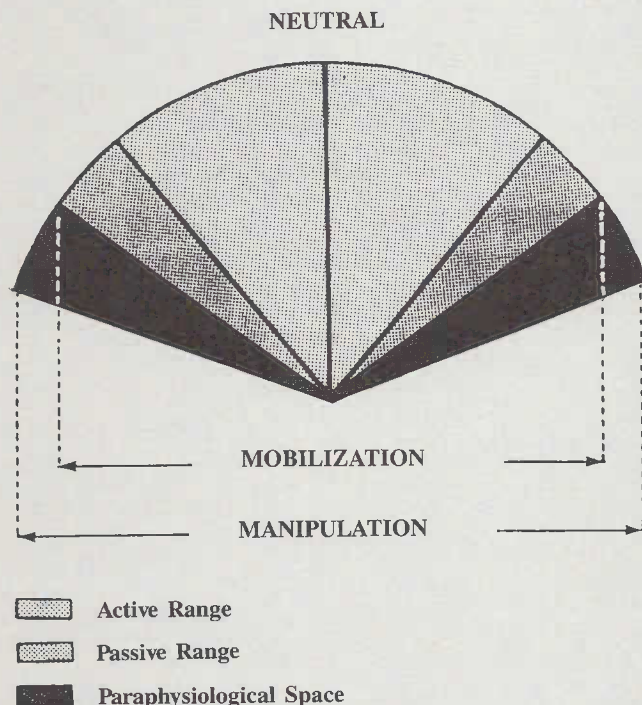

Fig 1. Ranges of Joint Movement – and the difference between mobilization and manipulation. (After Sandoz R: Some physical mechanisms and effects of spinal adjustments. Ann Swiss Chirop Assoc 6:91, 1976). *From 'Managing Low Back Pain' ed by Kirkaldy- Willis WH, Williams and Wilkins, Baltimore and London, 2nd edition 1988.*

4. In recent years much has been learnt about the characteristic 'crack' of the joint heard upon manipulation. This is the collapse of a gas bubble (80% carbon dioxide) as it is released from the joint fluid during manipulation. It is released because, as the joint surfaces separate, pressure drops.[5,6] An excellent new study by Mierau DC et al[6] clearly associates an audible crack with a radiographically visible gas bubble.

Significance

5. In a trial published in Spine in 1987[7] Hadler MD et al compared mobilization ("use of insufficient force to move the facet joints") with manipulation (a chiropractic technique of low-amplitude, high-velocity thrust) in the treatment of 54 patients with acute low-back pain – one group with duration of pain under two weeks, the other with pain from 2-4 weeks. Outcome was monitored by questionnaire immediately after treatment and every 3 days for 2 weeks:

- All patients improved steadily over this perioid.
- However one statistically significant response was found – the group of patients with sub-acute back pain (2-4 weeks) did much better with manipulation than mobilization. The advantage of manipulation "was most striking midway through the first week".

There is a body of evidence showing that manipulation produces faster results than other treatments or any treatment. This was the first controlled comparison of mobilization and manipulation.

6. In another recent trial Mierau DC et al[6] studied differences between manipulation and mobilization using a finger joint (the third metacarpophalangeal joint (MCP) because this is similar to the spinal facet joints but more accessible for measurement and study.)

The study consisted of two experiments, involving 31 subjects and 62 third MCP joints. In the first:

- Joints were subjected to a separating force resulting in either manipulation (audible crack and radiographically visible gas bubble) or mobilization (neither crack nor bubble).
- X-rays were taken before and after these procedures, both with the joint at rest and subject to 6lbs. traction.
- The mobilized joints displayed no difference in joint space (distance between opposing surfaces) before and after treatment. However manipulated joints, placed under 6lbs traction after treatment, "had a significantly greater increase in joint space."

The second experiment was a double-blind trial comparing the effects of manipulation and mobilization on passive flexion of the third MCP joint.

- MCP joint flexion was chosen as a measure because it was known to increase pressure within the joint (and tension on the collateral ligament) more than any other joint movement.

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Professional Notes: *continued from page 1*

Let's be quite clear – many patients will suffer injury and pain from crude manipulation from practitioners attending such a course. In Australia the standard for manipulation is set in government funded five year undergraduate university programs for chiropractors and osteopaths. Physiotherapists specializing in manual therapy require fulltime postgraduate study in formal courses adopting the excellent standards developed by Maitland. We will look with interest to see whether the Australian Association of Musculoskeletal Medicine, which contains those MDs with a true appreciation of the complexities of manipulation, is prepared to go on record to condemn this cavalier approach to education and patient safety.

Back in 1979 the noted New Zealand Commission of Inquiry into Chiropractic (which studied chiropractic and manipulation in New Zealand, Australia, North America and Europe) stated as one of its principal findings that "part time or vacation courses in spinal manual therapy for MDs, physiotherapists and other health professionals should not be encouraged." Chiropractors, who "carry out spinal diagnosis and manipulative therapy at a sophisticated and refined level" should have "the responsibility for spinal manual therapy training because of its specialized nature."

10 years later, in 1989, the time has well passed for long weekend courses – in Australia or anywhere else.

ABS Symposium – Las Vegas

• The American Back Society's Fall Symposium is being held November 30 to December 3, 1989 at the Hilton Hotel, Las Vegas. Course Chairman is Vert Mooney MD, Dallas, Texas. Co-sponsor of the ABS Chiropractic Postgraduate Continuing Education Series is the Palmer College of Chiropractic West. Director is James M. Cox DC, DACBR, who will speak on 'The Mechanisms, Diagnosis and Treatment of Low-Back Pain with Chiropractic Protocol'. Workshops include 'New Developments in the Chiropractic Management of Intervertebral Disc Disease', Cox DC and Thomas B. Milus DC.

If you have yet to attend an ABS Symposium, wish to hear the leading experts from all disciplines on current developments in spinal care, and see Las Vegas as a comfortable environment for this – this is a fine opportunity to stimulate your enthusiasm for practice. *Contact:* ABS, 2647 East 14th Street, Suite 401, Oakland CA 94601, Tel: (415) 536-9929. Fax (415) 536-1812. (For further details on format of ABS meetings see The Chiropractic Report, Vol 2 No. 5 (July 1988).

Quote-of-the-Month

I have a pain about two inches long that costs the country £1 billion a year. About £200 million more in drugs and health services. Unknown millions in comfort aids and compensation claims.

Perhaps 23 million people will get backache this year, over two million of them bad enough to go to the doctor. Two-thirds of these will be told their pain is 'non-specific' – in other words, doctors cannot diagnose it. Backache appears to be running wild in Britain without any concerted attempt to control it.

Last July a small niggling pain suddenly tore across my lower back; it felt exactly like a zip bursting open. Over six months I saw three specialists. The first manipulated me, and said that if that hadn't improved it the pain could be in my mind. The second told me I should rest flat for three months to let the damaged bit heal, or be disabled. The third said resting for three months would virtually cripple me; what I needed was vigorous back exercises. This was bewildering and frightening; one consultant was ordering what another forbade. With a new baby to care for I gambled on exercise and confrontation, rather than rest and retreat.

The back both mystifies doctors and bores them. The complicated structure and the ordinary pain are not in cost-effective relation to each other; cheap research isn't on, neither are glamorous prizes. A medical student has on average just half a day devoted specifically to the back, according to the national Back Pain Association.:

Your GP knowing that most back sufferers recover anyway, will probably play the percentage game and prescribe 'bed rest' for a couple of weeks. The percentage game leaves a fair crop of losers. Behind the airy term 'non-specific back pain' looms a good chance of being given the wrong treatment.

The only idea that has had public money recently is the Medical Research Council's project, which over two years has put 800 backache sufferers through a comparison of hospital out-patient treatment (physiotherapy, traction and drugs) with the alternative manipulative practice of chiropractic. Results are due at the end of the year.

Our worst enemy may be lifestyle. It is generally agreed that we sit too much and move around too little. We galvanise our generally unfit bodies into sudden strenuous activity (often in 'leisure' time). Our back muscles are feeble, floppy things compared to those of our grandparents, who had to walk to the shops, to carry wood and bend to light their fires, to chop and beat and knead their food. Our inventive brains are likely to make physical activity redundant faster than our bodies evolve to cope with laziness. Twenty-first century quality of life may turn out to depend less on comforts than on denial. Can we resist irresistible gadgets and actually get up to do things? Can we bother to take therapeutic exercise? Can we put survival of the species on to our business plans?

I am now to have my lower back manipulated under general anaesthetic. And I am no longer confused – I see all the confusion quite clearly.

Extracts from a recent article by Ismene Brown, The Observer, London, June 18, 1989.

The Distinction Between Manipulation and Mobilization: *continued from page 3*

• Joints that had undergone manipulation showed a statistically significant "greater increase in passive MCP joint flexion than (those given) mobilization." The trial showed that "therefore mobilization is not as effective as manipulation for increasing passive MCP joint flexion."

Conclusions

7. As Mierau et al observe, the emerging evidence shows *"manipulation and mobilization are distinct therapies with different effects on joint function* and that effects in clinical trials of manual therapy *should not be considered equivalent,* as they have been in the past."[6]

It is inappropriate, as has been the practice in physiotherapy/physical therapy, to view manipulation as a final grade or degree of mobilization.[8] The degree and nature of joint surface separation is different in manipulation.

8. What are the mechanisms of action in manipulation? Cassidy DC[5] suggests they include:

• In posterior joint syndrome, removing minor subluxation of facets and releasing entrapped synovial tissue.

• Stretching segmental muscles initiating reflexes that relieve hypertonicity (muscle spasm) and reduce minor subluxation.

• In chronic back pain, separating intra-articular adhesions that have been observed in posterior joints.

• Increasing range of joint movement causing increased proprioceptive input to the spine, thereby relieving pain through reflex inhibition.

References

1 'Controlled Trial of Mobilization and Manipulation for Patients with Low-Back Pain in General Practice' (1978) Sims-Williams H et al, Br Med J 2:1338-1340.

2 'Manipulation in Treatment of Low-Back Pain: A Multicentre Study' (1975) Doran DML and Newell DJ Br Med J 2:161-164.

3 'Manipulation' Chapt. 17 in 'Managing Low Back Pain' (1988) ed by Kirkaldy-Willis WH, Williams and Wilkins, Baltimore and London (2nd edition).

4 'Vertebral Manipulation' (1983) Maitland GD, Butterworths, London and Boston (4th edition), preface.

5 Ref. 3 supra, 289.

6 'Manipulation and Mobilization of the Third Metacarpophalangeal Joint: A Quantitative Radiographic and Range of Motion Study' (1988) Mierau D et al, Manual Medicine 3:135-140.

7 Hadler NM et al (1987), 'A Benefit of Spinal Manipulation as Adjunctive Therapy for Acute Low-Back Pain: A Stratified Controlled Trial' Spine 12(7):703-706.

8 'Vertebral Manipulation' (1983) Maitland GD, Butterworths, London and Boston (4th edition).

Main Article: *continued from page 2.*

(Damages were relatively modest under chiropractic care, because the plaintiff was now able to live her former lifestyle. At the time of trial she had no disability. Part of the award was for future cost of chiropractic care to maintain her normal spinal mechanics and recovery).

D. Obtaining Recognition

11. It is one thing to have expertise, quite another to have it recognized and used by the legal profession. What will bring recognition?

Increased Damages

12. In this area nothing is more important for chiropractors than making lawyers aware that, in appropriate soft tissue injury cases, they can gain higher settlements or court awards of damages for their clients by use of chiropractic evidence. This may be done by using the treating chiropractor or, as in the California case cited above (see para 1), a consultant chiropractor.

In another recent whiplash case the plaintiff, a young secretary who experienced prolonged disability and distress after her sports car was rear ended, was able to settle a case for $27,000 – double what would have been achieved on the medical evidence. This was because she was under chiropractic care (in this case on medical referral) and her chiropractor was able to give a persuasive report on the precise nature of her injuries, why her pre-accident status left her vulnerable to injury, the impact on recovery of her secretarial work which involved static loading of the cervical spine for extended periods while working at a computer terminal, and the increased risk of early degeneration because of factors already evident on x-ray.

Report Writing

13. Quality of report writing is of next importance. First impressions are strong, and all expert evidence commences as a written report. (In many jurisdictions to save cost and time, a case can now go to trial on written reports unless counsel serves notice requiring experts to be called for cross-examination).

Traditionally chiropractic reports have not been well written, tending to be too lengthy, filled with inappropriate detail, and unclear to lawyers on the essentials of diagnosis and prognosis. Important aspects of report writing include:

a) Make appropriate choice of professional letterhead, quality weight of paper, and invest in good word processing/typewriting equipment. This is particularly important for all professionals in a modern world where, to an unhealthy extent, quick judgements as to competence are made from appearance on paper.

b) In preparing a report remember that you are providing a summary, the essence, not a history of all your examinations, findings and management. Pace of life and the short attention span of your readers means that a report of more than three sides is rarely justified.

c) Format is crucial. The essence of your message must be found quickly in short paragraphs under clear headings (such as history, past history, examination, clinical findings, management, and prognosis). If, as is likely, you have more than one significant clinical finding or component of treatment, list them numerically in sub-paragraphs.

Once scientific papers had no paragraph headings or summaries. Next came summaries (abstracts) and headings. Today there are headings even within abstracts. The same applies to court judgements. Everyone is looking for easy comprehension in a crowded world. A good professional report must be accessible and clear.

d) Use generic rather than chiropractic language, and where there is mention of a specific test give its essence rather than the technical name (e.g. 'heel to buttock' testing rather than 'Ely's test'). Legal reports have a precise market – they are written to inform and impress attorneys/lawyers – not colleagues or other health professionals.

X-ray

14. A problem with soft tissue injuries, from a legal viewpoint, is that there is often no objective evidence of injury. Lawyers love hard evidence. Judges are used to it, and in its absence there is an uneasy atmosphere for all expert witnesses.

This makes competence in, and clarity of, radiological findings particularly important. On this:

a) A number of chiropractic texts and papers document the ways in which weight-bearing static and functional stress radiographs can provide objective evidence of soft tissue injuries and dysfunction.[9,10,11]

b) Even where x-rays do not yield objective evidence, the quality of current chiropractic radiological analysis invests a chiropractic report or witness with an underlying sense of expertise which is important.

c) Although sophisticated new imaging techniques such as CT scanning and MRI are appropriate in some cases, there is widespread agreement that plain x-ray remains the gold standard in the average case. (For a good recent summary on x-ray reporting see 'Report Writing in Skeletal Radiology' by Rowe DC and Yochum DC.)[9]

The Scientific Literature

15. Lastly, every opportunity should be taken to make the legal profession aware of the depth of chiropractic literature now available to support the opinions of the individual chiropractic expert witness. Chiropractic has lacked rigorous scientific literature in the past – but no more. An attorney/lawyer who understands that:

- one of the world's foremost medical experts on the cervical spine, Ruth Jackson MD, FACS, has called a recent chiropractic text "the most remarkable compilation of scientific and factual data thus far published concerning the many facets of the cervical spine"[10]
- that chiropractic template analysis from functional x-ray as described by Korbelas DC and Henderson DC[11] can provide objective documentation of individual vertebral dysfunction (now endorsed in medical literature)[12]

immediately develops new respect for what the chiropractic profession has to offer. He/she is well on the way to retaining a chiropractic witness for the first time.

If, as emphasized at the outset of this discussion, there is the prospect of this evidence pressuring settlement to provide more money for the client, he/she will call a chiropractor.

E. In Court

16. Should the case go to trial and the experts be called to give oral evidence, the weight to be given to the evidence of each will have already been half decided from the quality of the written reports – already read by the judge and the basis of opposing counsel's preparation of cross-examination. As has been discussed, take time in advance to ensure that counsel calling you as witness qualifies you well – with respect to education, experience in practice generally and with respect to this type of patient, and any relevant academic activity (publications and teaching).

17. Much has been written about the techniques of presenting evidence in court, but they can be reduced to a few essentials:

a) The hallmarks of the true expert are firmness and clarity on central findings and conclusions; willingness to admit limitations of knowledge outside the exact area of his/her expertise;

impartiality (no appearance of shaping the evidence to suit the case); and use of plain and simple language. The best expert witnesses appear informed but humble.

b) Unless experienced in court, expect to be nervous. Most people are, the judge understands this whatever his/her appearance and mood may be, and a natural manner will be far more effective than bravado. It is a great help to have reviewed your file the night before, be in good time for court, and be dressed conservatively and comfortably. These precautions remove common sources of last-minute panic and unnecessary anxiety.

c) While waiting to give evidence do not constantly review details with the impression that you are faced with a feat of memory, and may forget an important item. Enter the witness stand with your mind focused on the relatively few central findings you have made and wish to relate to the court. The details will come back to you from your earlier preparation, and they are there in your file anyway.

d) Always some aspects of evidence will not go as well as you like. Ignore this and get on with the rest of your testimony. It is the same for everyone. If the issue is important, counsel calling you has the right of re-examination and it is his/her fault, not yours, if a matter of importance is left as a loose end.

F. Conclusion

Chiropractors today have formal training, experience, and skill in the assessment and management of neuromusculoskeletal disorders that makes them potentially valuable expert witnesses for attorneys/lawyers acting for clients with soft tissue injuries.

Formerly many chiropractors possessed the necessary skill but various factors made it generally unwise for attorneys/lawyers to rely upon chiropractic expertise against medical witnesses – including unclear standards of chiropractic education, lack of chiropractic research and scientific literature to provide necessary corroboration and weight, and widespread medical criticism of chiropractic standards and management of musculoskeletal problems.

The last 15 years have produced radical change in these areas. For example:

- Independent medical[13] and government[7,14] studies have found that chiropractic students at accredited colleges receive the same level of education in basic sciences as medical students. (In virtually all jurisdictions where legislation regulates the practice of chiropractic candidates for Board examinations to gain a licence to practice must have graduated from an accredited college).
- The most thorough and authoritative independent government study of chiropractic has found that chiropractic education also involves a unique and specialized branch of the healing arts in which chiropractors diagnose "biomechanical disorders of the spinal column" and correct them by manual therapy, "at a sophisticated and refined level." In the limited field of x-ray relevant to chiropractic practice, the chiropractor is "at least as well-trained as the medical radiologist".[7]
- The opinions of the individual chiropractic expert witness are now supported by an impressive body of literature. (The single most comprehensive and accurate system for assessing prognosis in whiplash injury cases, drawing on both chiropractic and medical experience, is in the chiropractic text 'Whiplash Injuries: The Cervical Acceleration/ Deceleration Syndrome').[10]
- There is burgeoning evidence of cooperation between chiropractic and medicine in education, research, and practice, producing a new consensus on the importance of skills central to chiropractic practice – the accurate identification of joint and muscle dysfunction, early active management to restore function as opposed to rest and passive therapy, and the effects of trauma and prolonged dysfunction at one joint on future degeneration at this and adjacent joint levels. (It is now accepted that rest and immobilization of a joint not only delays healing but causes osteoarthritis – with first degenerative changes measurable within one week).[15,16]

Accordingly, litigation attorneys/lawyers should look with new interest at the opportunity of clients benefitting from chiropractic expert testimony – from either treating chiropractors or consulting specialists with relevant post-graduate qualifications and experience.

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