

Dangerous rises in blood pressure may also occur when patients are given vasopressor agents, such as noradrenaline and angiotensin, systematically. If noradrenaline were given to patients on tricyclic antidepressants an excessive rise in pressure might occur by virtue of the inhibition of neuronal uptake of the catecholamine. The response to noradrenaline is also exaggerated if the patient is on a drug such as guanethidine or reserpine, and this is caused by denervation hypersensitivity. Dopamine, a valuable agent in treating shock, increases renal blood flow and stimulates cardiac output in moderate doses. High doses can stimulate alpha-adrenoceptors and raise blood pressure considerably and may, incidentally, produce cardiac arrhythmias. Blood pressure must be monitored carefully when any vasopressor agent is being given.

Drug-induced hypotension

Hypotensive agents aside, several other unrelated drugs may lower blood pressure as an undesired effect. Among the best recorded are the phenothiazines, by virtue of their alpha-adrenoceptor blocking effect. This is especially important when this group of drugs are given with antihypertensive agents, and usually has a postural element. Many central depressant drugs will cause an unpredictable and unwanted fall in blood pressure, again often of a postural nature, and this may be more evident in the elderly.

Peripheral arterial spasm

Peripheral arterial spasm manifesting as Raynaud's phenomenon and occasionally progressing to gangrene has been

seen in patients taking ergot-containing preparations to excess for migraine. Arterial spasm and occlusion also may occur when intravenous barbiturates or intravenous diazepam are injected intra-arterially in error.

Thrombophlebitis and venous thrombosis

Local vein damage can occur as a result of any intravenous procedure—for instance, venepuncture or insertion of catheters—irrespective of any drug administered. Drugs most often implicated, however, are the antibiotics, amphotericin B and vancomycin, high-concentration sugar solutions, and, less often, diazepam. Considering the widespread use of intravenous contrast media and intravenous barbiturates, the overall risk of venous complications with them appears relatively small.

A major cause for concern is venous thrombosis and thromboembolism with contraceptive steroids. The incidence of venous thrombosis is up to six times greater in women on oral contraceptives, but with the increasing popularity of low-oestrogen-dose preparations the magnitude of this risk should decrease. Patients taking high doses of conjugated oestrogens also have an increased incidence of venous thrombosis, but when used in doses conventionally given for treating menopausal symptoms the risk is apparently not increased compared to a control population.

Further reading

Davies, D M, ed, *Textbook of Adverse Drug Reactions*. London, Oxford University Press, 1976.
 Meyler's *Side Effects of Drugs*, ed M N G Dukes, vol 8. Amsterdam, Excerpta Medica, 1976.

Letter from . . . Chicago

Healing by touching

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In 1885 Daniel David ("DD") Palmer pushed a bump on a deaf janitor's neck and promptly restored his hearing—whereupon this Toronto-born former Illinois bee-keeper gave up the arts of phrenology and mesmerism, and smashing up his magnetic mirror henceforth applied himself to the science of laying hands on people's spines and adjusting them "without the use of drugs, medicine, or instruments."¹⁻³ Having thus discovered the chiropractic principle of restoring nature's innate life-giving force's ability to flow down the spinal canal ("by relieving any impingement on the delicate nerve fibres"), he became the founder of a discipline that was to endure through the next century. Today some 18 000 chiropractors are

licensed in the United States,⁴ and all 50 States recognise the descendants of the disciples of the man with the "keen mind that fully grasped the scientific principle and the courageous discoverer and humanitarian who—as a man of destiny—gave to the world this priceless gift of health."⁵

The early days of the new cult, however, were inauspicious. In 1905 the founder went to jail rather than pay a \$500 fine for practising medicine without a licence.² Yet by the time of his death in 1913 the science of restoring the free flow of nature's innate intelligence had become fairly well established, owing mainly to the efforts of his son, Bartlett Joshua ("BJ") Palmer, the bearded man who boasted that no razor had ever crossed his chin.² In 1895 the Palmers had established their College of Chiropractic in Davenport, Iowa, "after years of intensive study and research in developing the scientific premise upon which the profession of chiropractic is founded."⁵ Later, after a series of arguments between the two Palmers, the son attempted to run over the father with the school car, and henceforth BJ remained the sole dean of the school until his death in 1961 at the age of 79.¹⁻³

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It was thus BJ Palmer who first put chiropractic on a real scientific basis, by inventing a new system of anatomy consisting of four circulatory systems, of which the most important was the spinal.¹ He related all human illnesses to subluxations of the spine, and in 1924 designed the neurocalometer, a box with a dial and two prongs that could be passed up and down the spine to detect the heat given off by subluxations.¹ Later, BJ and his associates also introduced the use of complete spine radiographs, to be used in "every case" to detect subluxations—as well as to promote confidence, create interest among patients, procure business, attract a better class of patients, add to prestige in the community, and build a reliable reputation.⁶

A lover of circus and the owner of an extensive collection of spinal cords, BJ was also the proud possessor of the mummy of an Egyptian princess.² In 1919 in order to popularise chiropractic he founded in Des Moines America's second radio station, WOC (Wonders of Chiropractic).² But almost since its beginning, and to this very day, chiropractic has been troubled by a split between a minority of "straights," who use only manipulation, and a majority of "mixers," who also use mechanical gadgets, nutritional cures, relaxation, and percutaneous nerve stimulation.⁴ The straights accuse the mixers of being frustrated doctors who practise without a licence; but both groups rely heavily on testimonials, insist they are primary care physicians qualified to cure most ills of humanity, and, indeed, in 1973, were recognised by Medicare as qualifying for reimbursement, but only for correcting deformities that can be shown by radiographs.⁴

Success of chiropractic

The success of chiropractic has been attributed at least in part to the reality that ever since assuming the erect posture homo sapiens has been at risk of developing pain and discomfort in his back; and at least since the time of Hippocrates (and possibly much earlier) he has sought relief from individuals willing to massage or manipulate his spine.⁷ And, while orthodox medicine has neglected this approach, offering little or no training in manipulation to its students, chiropractors also tend to be more friendly and down to earth, never talk down to their patients, appear to have unlimited time, always offer an explanation the patient can understand, always promise a cure, and, since most back ailments are self-limited anyway, can boast a high rate of success in their practice.¹ Indeed, "there are few therapies that have the advantages of laying on hands, relaxing tense muscles, causing a sensation in the area of pain, the click or pop of the adjustment, and a clinician who has complete confidence in his therapy."¹

But many chiropractors also rely on drugs, and while violently opposed to prescription drugs (which they are not allowed to dispense), they apparently are great advocates of various over-the-counter preparations, and often recommend nutritional cures and megavitamins, for which they often offer to sell the ingredients in their offices.⁶ They have often been criticised for their unscientific approach, their inadequate training, for being responsible for delays in the diagnosis of serious illnesses, for overexposing people to radiation, and for causing injury through their manipulations, although this appears to be rare.⁶ Clearly they also compete for that vast body of patients who visit doctor's offices for self-limited or psychological symptoms. And indeed, foremost among the impediments to the free-flow of chiropractic's innate intelligence has been the American Medical Association, which has short-sightedly failed to recognise the scientific basis of the founder's discovery and has tried to keep his proselytes out of the health-care business. Yet 90 years after their founder's discovery the chiropractors carry on a flourishing business in restoring the free flow of energy throughout the body, "a constant vigil is maintained over the Palmer College Campus by the statue of Dr D D Palmer,"⁵ some 16 other colleges have sprouted in various

parts of the United States,⁴ and chiropractors in all 50 States manipulate spines for lumbago, sciatica, prolapsed discs, and, occasionally, metastatic cancer.

Successful lobby

One of the strengths of chiropractic has been the extremely successful grass roots lobby, based largely on grateful patients whose backs presumably are no longer painful.⁶ Having won recognition by the Federal government the chiropractors hope to be included in the arrangements of any future national health insurance. Meanwhile they have also been active in the courts, and lately sued the AMA in Pennsylvania and New Jersey, charging "restraint of trade," asking to be granted access to laboratory and x-ray facilities, and alleging that a conspiracy was denying them such access.⁸ In December the AMA settled out of court the Pennsylvania case by agreeing that specialists, including radiologists and clinical pathologists, could choose to accept or decline seeing patients referred by chiropractors. Many doctors and some professional societies decried the settlement as a medical Munich, tantamount to professional suicide.⁸⁻¹⁰ But the 271-member house of delegates of the AMA, meeting behind closed doors, hammered out an agreement allowing individual doctors, but not organised medicine as a whole, to associate professionally with chiropractic.¹⁰

With regard to the broader Illinois suit—alleging conspiracy to monopolise health care by labelling chiropractic an unscientific cult and a hazard to health—the AMA was unpromising; and it issued another warning on the dangers of letting chiropractors treat diabetes, cancer, hypertension, and all other diseases supposed to arise from a misalignment of the spinal vertebrae.¹⁰ And even within the chiropractic profession itself there has been a tendency to renounce some of the founder's original dogma, to emphasise the possible benefits of manipulation, to call for a need of scientifically evaluating its effects, and to find a connecting bridge with the medical profession.⁷ But meanwhile the class suit in Illinois continues to be argued in the courts, and the last word on chiropractic has yet to be written. Moreover, chiropractic is but the tip of the iceberg. For there are also those who heal with herbs, with needles, with special foods; who look at the stars, the iris, the muscles, the ying and the yang; who heal with rolfing, shiatsu, polarity treatment, aeriontherapy, or psionic medicine¹¹; and whose vast therapeutic armaments clearly put to shame the efforts of the primitive healers who merely push bumps on people's necks.

References

- ¹ Luce, J M, *The Pharos*, p 12. April, 1978.
- ² Mills, G S, *Rogues and Heroes from Iowa's Amazing Past*, p 234. Iowa State University Press, 1972.
- ³ McQueen, D V, *Social Science and Medicine*, 1978, **12**, 69.
- ⁴ Manber, M M, *Medical World News*, 11 December 1978, p 59.
- ⁵ *Palmer College of Chiropractic Bulletin*, 1972-3.
- ⁶ CU, *Pennsylvania Medicine*, May 1976, p 52.
- ⁷ Thompson, P, *Canadian Medical Association Journal*, 1975, **113**, 454.
- ⁸ Bronson, G, *Wall Street Journal*, 5 December 1978, p 40.
- ⁹ Rollins Hanlon, C, *Bulletin of the American College of Surgeons*, 1978, **63**, 1.
- ¹⁰ *American Medical Association News*, 15 December 1978, p 1.
- ¹¹ Ralman, A S, *New England Journal of Medicine*, 1979, **300**, 312.

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What is the value, if any, of anabolic steroid treatment in the otherwise healthy man who complains of fatigability or lack of energy?

There is no value in prescribing anabolic steroids for fatigability or lack of energy. A proper diagnosis should be established since such symptoms are common in anxiety or depressive illness for which specific treatment is available.