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ASPECTS OF TREATMENT*

The best back to manipulate?

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Summary

A series of 104 patients 'cured' by one, or at most two, manipulations in reviewed. A clinical syndrome emerges—recent and/or sudden onset of back pain and leg pain, no neurological symptoms or signs, a mechanical pattern of back movements with extension more limited than flexion, straight leg raising (SLR) more than 60° and no neurological signs.

Introduction

The study of the non-operative treatment of people suffering back pain is fraught with two major difficulties.

Diagnosis Many lables are attached to such patients, mostly without any scientific basis. It seems likely that many, if not most, of them are *not* true disc protrusions as understood by the orthopaedic or neuro-surgeon; yet they are often told they have a disc or a disc lesion; some may even have had a disc put back! Other diagnoses made, with no basis in pathology, include lumbago, fibrositis, a joint out of place or an osteopathic lesion. As there is virtually no opportunity to examine the pathology in such patients it seems reasonable to use a term that does not imply a specific pathology. It was for this reason that I coined the phrase 'Mechanical derangement of the spine' in 1975 (*1*) to denote all those conditions (including discs) which had a mechanical pattern of back movements, i.e. movement in one range restricted more than its opposite.

Cure Backache is such a common symptom that few people can go through life without suffering it at some time and in some degree. Mostly it is self-limiting and, in the majority of instances, relatively short-lived. However, it often recurs. It is, therefore, unrealistic to talk in terms of a 'cure' in terms of complete, life-long freedom from pain, though people may be relieved of their pain in any particular episode. In my previous article (*1*) I used the term 'helped' to indicate that the patient was sufficiently better not to need or seek further treatment.

Methods

Over a number of years I have seen many patients who have been relieved, helped or 'cured' by one, or occasionally two, manipulations. These patients notes were reviewed with particular reference to history and physical signs to see if it was possible to identify the type of patient most likely to benefit from manipulation.

Results

There were 104 patients—51 men and 53 women. Table I shows the age distribution. The youngest was 20 and the oldest 75.

Approximately half the patients (53) gave a clear history of sudden onset of pain; the others (51) did not, so were considered to have had a gradual onset. Table II shows the duration of symptoms. Thirty-six patients had symptoms for less than a fortnight and 53 (approximately 50%) had symptoms for less than a month. However, 24 patients had suffered their pain for more than 6 months.

TABLE I *Age distribution*

Less than 30	*31–40*	*41–50*	*51–60*	*More than 60*
16	22	31	29	6

TABLE II *Duration of symptoms*

Less than 1 week	*Less than 2 weeks*	*Less than 1 month*	*Less than 3 months*	*Less than 6 months*	*More than 6 months*
23	13	17	21	6	24

Ten patients did not complain of back pain. Thirty-one patients had no leg pain but, surprisingly (to me at any rate), 73 patients did have sciatica. Of these 12 had bilateral leg pain but otherwise the distribution between right and left was equal. Only 22 patients had above knee pain; in 32 it extended below the knee and in 12 it reached the foot. In spite of this only 17 had neurological symptoms—9 had paraesthesiae (pins and needles), 7 numbness and 1 complained of weakness.

Although some patients had restricted movements in all directions, which might indicate an arthritis, none had all movements equally restricted. Only 6 had both flexion and extension equally restricted (but lateral movements were unequal), and only 5 had lateral flexion restricted equally to right and left (but flexion/extension movements were unequal). Thus in all patients there was a mechanical pattern of movements, i.e. unequal restriction of movements in at least one pair of movements. Examining flexion/extension in 30 patients flexion was more restricted than extension, whilst in 65 extension was the more restricted. In 3 patients neither movement was restricted and in 6 both were equally restricted. Looking at lateral flexion, in 55 patients lateral flexion to the left was more restricted than to the right whilst in 40 the reverse was the case. In 4 patients there was no restriction to either side and in 5 both movements were equally restricted. Eighty-six patients had no discernible tilt on standing; 3 had a tilt to the left, 15 to the right. Ninety three patients had tenderness on the side to which there was restricted lateral flexion and 17 had bilateral tenderness.

No patient had a straight leg raise (SLR) of less than 30°; in 13 the SLR was between 30° and 60° and in 91 the SLR

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was more than 60°. Two patients were thought to have motor weakness, 5 had signs of sensory change and 6 had a diminished tendon reflex.

A clinical picture or syndrome emerges which I have termed 'the most manipulable back'.

The features can be summarised as:

History	Back pain	(nearly all)
	Leg pain	(three-quarters)
	Sudden onset	(a half)
	Recent onset	(a half)
Examination	Mechanical pattern of movements	(all)
	Extension decreased more than flexion	(two-thirds)
	Lateral flexion to one side decreased more than to the other	(nearly all)
	SLR more than 60°	(nearly all)
	Neurological signs	(very few)

Discussion

In spite of a greater acceptance in recent years manipulation still seems to be shrouded in mystery.

There have been attempts to compare the effectiveness of manipulation with other forms of conservative treatment (*2–6*). Nearly all have two major difficulties: they do not define the type of backache or sciatica treated, and most compare the results at 3 months or longer. It is hardly surprising that, after such a period, neither manipulation nor any other treatment showed any marked difference. A few (*2,5*) make the point that manipulation can give *early* relief. This series concentrates only on the immediate relief obtained by one, or occasionally two, manipulations—indeed the physical signs can be seen to have changed immediately after the manipulation. A clinical syndrome has emerged defining the patient most likely to benefit from such treatment. It is not claimed that such patients are the only patients who will benefit from manipulation (indeed I know this is not the case) but the plea is made that if further trials are to be conducted, as they should be, an effort should be made to make a true comparison in the type of patient treated.

It is often said that nothing changes in medicine; indeed perhaps research is aptly named—re-search. When examining the literature whilst preparing this paper I came across an article written in 1930 by one E W Riches (*7*), who was later to become a Vice-President of our College and win international repute in genito-urinary surgery! He was analysing the results of patients who had been manipulated under a general anaesthetic whereas my patients were all manipulated without anaesthetic—by a simple rotational technique. It is interesting to note that he, too, found most success in cases with a history of injury by a sudden unguarded movement, a tender spot over some part of the erector spinae with the muscle in spasm and lateral flexion in one direction restricted (though he found it most in the direction away from the side of tenderness). This paper is remarkable also for many of the theories of causation or diagnosis and some of the remedies used which must have been avant-guarde then but which are now regarded as newly found truths—some 50 years later!

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