

Study of 500 patients attending an osteopathic practice

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SUMMARY. *The experiences of 500 consecutive patients presenting with a new episode of illness at a five practitioner osteopathic practice in an east midlands town is reported. The osteopath completed a structured questionnaire about each patient who then completed two symptom questionnaires, one before treatment and a second four months later. Questionnaires were completed by osteopaths for 495 patients (99.0%). Almost all patients completed the first questionnaire (98.6%) and 367 patients (73.4%) completed the second questionnaire. Female patients had more treatment sessions than male patients (3.2 versus 2.7 over the four month period, $P<0.01$) and suffered from more spinal muscular problems and postural imbalance than males ($P<0.05$). The commonest diagnostic group was spinal joint sprain and patients with this diagnosis reported significantly better symptom improvement at four months than those in other diagnostic groups. Greater improvement at four months was also associated with shorter duration of illness before treatment ($P<0.001$). The 147 patients who had seen their general practitioner before attending the osteopath had worse symptoms of a longer duration than the 347 patients who had not seen their general practitioner ($P<0.001$), but showed greater improvement in symptoms over the subsequent four months. It is concluded that suitable patients should be encouraged to attend an osteopath early on in an illness. In subsequent episodes, if osteopathic treatment is of benefit to them, patients should attend before they see their general practitioner.*

Keywords: *osteopathy; musculoskeletal disorders; outcome.*

Introduction

OSTEOPATHY is a system for diagnosis and treatment which lays main emphasis on the structural and mechanical problems of the body. It is often used as a substitute or adjunct to the general medical treatment of musculoskeletal disorders, especially of acute back problems, which are so common.¹ Most of the estimated four million consultations per year in the United Kingdom for complementary medicine² are for pain.³ There are 1706 registered osteopaths, more than any other group of complementary therapists.⁴

Of general practitioners in England, 72% refer patients to complementary therapy,⁵ most commonly for manipulation.⁶ In New Zealand the comparable figure is 69%,⁷ while in the Netherlands it is 90%.⁸ In 1991, Thomas and colleagues estimated that a third of patients attending for complementary medicine had consulted the general practitioner with their problem first, half of these having also seen a hospital specialist.²

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Although a randomized comparison between chiropractic and hospital outpatient treatment has shown the greater efficacy of chiropractic treatment,⁹ little is known about benefits from osteopathy for patients in the community. Some practices are, however, sufficiently convinced to offer osteopathy free of charge to their patients within the National Health Service.¹⁰

The aims of this study were to describe the characteristics and diagnoses of a cohort of patients attending a group of osteopaths; to define which diagnoses responded best to intervention by an osteopath; and to study patients' previous experience of primary and secondary care for their illness episodes.

Method

Five hundred consecutive patients with a new illness episode attending a practice of five osteopaths in an east midlands town were asked to complete a self report symptom questionnaire. This consisted of 10 symptoms or effects which the patient rated on a visual analogue scale. The ratings were then marked over 10 equal divisions. Recruitment into the study lasted two months and two days in mid-1989. The patients were then seen by an osteopath who completed a structured questionnaire which included the patient's main diagnosis made by the osteopath, the duration of symptoms, and the patient's previous experience of conventional medicine. Categorization into simple diagnostic groups is not a concept used in osteopathy, but was necessary to make the patient groups identifiable. Many patients fitted multiple categories and the osteopaths were asked to record the diagnosis which caused most symptoms for the patient, even though they may have sought to relieve it by treating another component. Definitions of four of the main diagnoses are given in Appendix 1.

The process of care until discharge or non-attendance was recorded by the osteopaths on the questionnaire and four months after starting treatment a second self report symptom questionnaire was sent to each patient at his or her home. Non-respondents to this second patient questionnaire were reminded once.

Analysis

The data were analysed using *SPSS-PC*. The chi square test was used to test differences between male and female patients by diagnostic category, and for duration of symptoms by whether the general practitioner had been consulted before attendance at the osteopathic practice. The Pearson *r* correlation was used to compare patient expectation of improvement with reported improvement. Differences between patients with different durations of symptoms were tested using one way analysis of variance (three degrees of freedom). The two tailed *t*-test was used for sex differences in changes in symptom rating and number of treatment sessions; differences between the reported symptom change for diagnostic categories; and comparison between those patients who had seen their general practitioner before starting osteopathic therapy and those who had not.

Results

Of the 500 consecutive patients presenting with a new episode of illness, the osteopath completed the structured questionnaire for 495 (99.0%). However, some data items were missing from up to five of the questionnaires, so the number for analysis varies

between 490 and 495. A total of 493 patients (98.6%) completed the first self report symptom questionnaire and 367 patients (73.4%) completed the second questionnaire four months later. The age distribution and sex of the patients is shown in Table 1; 255 patients were male and 236 female. The largest group of patients were those aged between 41 and 60 years, accounting for 44.0% of patients. A total of 305 patients were new to the osteopathic practice.

The osteopaths found that treatment was unsuitable for 12 patients (2.4%) and predicted that 144 (29.1%) would need six or more treatment sessions. The mean number of treatment sessions over the four month follow-up period was, in fact, 2.7 for 252 male patients and 3.2 for 235 female patients (some of the patients whom the osteopath considered unsuitable for treatment still underwent treatment) and this difference between the sexes was significant ($P<0.01$). The diagnoses, according to the osteopaths' definitions, are shown in Table 2. Spinal joint strain was the most common diagnosis, accounting for 30.5% of diagnoses. A spinal muscular problem was diagnosed significantly more frequently in female patients than in males, as was postural imbalance. Disc herniation was diagnosed significantly more frequently in male patients.

Overall, patient expectations of improvement were significantly correlated with actual improvement reported ($r=0.17$, $P<0.001$) and to the osteopath's prediction of good short term ($r=0.21$, $P<0.01$) and long term ($r=0.20$, $P<0.001$) outcome. The overall differences in patient reported symptoms over time are shown in Table 3.

When the patients' reported improvement was compared for each diagnostic category with all the other categories combined, there was significantly greater improvement in symptom rating by patients with spinal joint strain — overall improvement (improvement achieved) ($P<0.01$); pain intensity ($P<0.001$) and amount of day spent in pain ($P<0.05$); and effect on employment ($P<0.05$) and home activities ($P<0.05$). Spondylosis sufferers had, however, significantly less symptom change than the other categories combined for pain intensity ($P<0.05$), numbness ($P<0.01$) and effects on employment ($P<0.05$).

While 177 patients (35.8%) had had symptoms for one week or less before presentation at the osteopathic practice, 142 (28.7%) had had them for between two and five weeks, 57 (11.5%) for between six and 10 weeks, and 118 patients (23.9%) for 11 weeks or more. Those patients with duration of symptoms longer than three weeks expected less improvement ($P<0.001$), and reported less overall improvement ($P<0.05$) than those with shorter duration of symptoms. They also made more visits to the osteopath ($P<0.001$) and reported less improvement, as measured by change in symptom rating between the two self report symptom questionnaires for pain intensity ($P<0.001$), amount of day spent in pain ($P<0.001$), stiffness ($P<0.001$), and effect on employment ($P<0.001$), home activities ($P<0.001$), and social activities ($P<0.01$).

Patients had previously attended their general practitioner with the presenting illness episode in 147 cases (29.7%), with 48 (32.7%) claiming to be satisfied with the care received, and 99 (67.3%) unsatisfied. Twenty three (4.7%) of all 494 patients had seen a hospital consultant with their problem, of whom 19 (82.6%) were unsatisfied; 27 (5.5%) had seen a physiotherapist of whom 19 (70.4%) were unsatisfied; and seven had seen another osteopath of whom four were unsatisfied.

The 147 patients who had consulted their general practitioner before attending the osteopath had symptoms of longer duration with a mean symptom duration of 29.3 weeks compared with 16.7 weeks for the 347 patients who had not consulted the general practitioner ($P<0.001$). Those patients who had seen their general practitioner were rated by the osteopaths as likely to have

Table 1. Patients attending the osteopathic practice, by age and sex.

Age (years)	% of patients (n = 491)	
	Male	Female
0-20	2.2	0.8
21-40	19.4	15.3
41-60	22.8	21.2
61-80	7.3	10.2
81+	0.2	0.6

n = total number of patients for whom information available.

Table 2. Diagnoses for 492 patients, by sex.^a

Diagnostic category	No. of patients:		% of total (n = 492)
	Male (n = 256)	Female (n = 236)	
Spinal joint sprain	86	64	30.5
Spinal muscular problem	24	39*	12.8
Spondylosis	21	25	9.3
Sacroiliac strain	17	9	5.3
Hyper/hypomobile instability	12	11	4.7
Postural imbalance	6	15*	4.3
Disc herniation	16	4*	4.1
Rotator cuff strain	8	9	3.5
Nerve root irritation	10	6	3.3
Osteoarthritis of hip or knee	7	8	3.0
Spinal segment somatic dysfunction	7	5	2.4
Peripheral muscular problem	6	5	2.2
Peripheral joint sprain	2	7	1.8
Epicondylitis	4	5	1.8
Knee cartilage/ligament injury	5	2	1.4
Rib strain	1	5	1.2
Soft tissue injury (mechanical)	4	1	1.0
Soft tissue injury (post-fracture)	1	1	0.4
Adhesive capsulitis	1	1	0.4
Prolapsed intervertebral disc	2	0	0.4
Strain of piriformis	2	0	0.4
Costochondral strain	0	2	0.4
Psoas dysfunction	1	0	0.2
Carpal tunnel syndrome	0	1	0.2
Tenosynovitis	1	0	0.2
Cranial problem	0	1	0.2
Neurological disorder	1	0	0.2
Other	11	10	4.3

n = total number of patients for whom information available. * $P<0.05$.

^a Many patients fitted multiple categories of diagnoses but the osteopath recorded the most symptomatic category.

a worse short-term outcome ($P<0.001$), and to need more treatment sessions ($P<0.001$). The number of treatment sessions actually given was higher among the patients who had seen their general practitioner (mean of 3.9 treatment sessions versus 2.7; $P<0.001$), especially if those dissatisfied with general practitioner care were compared with all others (mean of 3.7 treatment sessions versus 2.8; $P<0.001$).

Those patients who had seen their general practitioner had greater expectations of improvement from osteopathy (t test, $P<0.001$), had worse reported pain ($P<0.001$) for more of the day ($P<0.001$), more numbness ($P<0.001$), more stiffness ($P<0.05$), more tiredness ($P<0.001$), and more restriction on employment ($P<0.001$) and social activities ($P<0.001$) than those who had not. They reported a greater improvement with osteopathic treatment, especially in reducing numbness ($P<0.001$) and tiredness ($P<0.05$), and improving employment ($P<0.001$) and social activity ($P<0.001$).

Table 3. Self report symptom rating before osteopathy treatment and four months later, and changes in rating over time, by sex.

Self report symptoms	Mean patient rating		Change in mean patient rating		
	Before treatment (n = 493)	4 months later (n = 367)	All	Male	Female
Intensity of pain (0 = no pain; 9 = unbearable)	4.43	1.63	-2.71	-2.94	-2.61
Amount of day spent in pain (0 = none; 9 = 24 hours)	5.14	1.80	-3.23	-3.63	-2.82*
Numbness or tingling (0 = none; 9 = very strong)	2.25	1.02	-1.15	-1.27	-1.04
Stiffness of movement (0 = none; 9 = very stiff)	4.55	1.87	-2.62	-3.16	-2.12***
Tiredness (0 = lots of energy; 9 = tired all the time)	4.02	2.89	-1.10	-0.88	-1.32
Effect on normal work (0 = none; 9 = prevents work)	3.90	1.27	-2.53	-2.63	-2.38
Effect on jobs at home (0 = none; 9 = cannot do any)	5.01	2.11	-2.76	-3.20	-2.35**
Effect on social life (0 = none; 9 = can never go out)	2.61	0.92	-1.72	-1.80	-1.64
Effect on personal relationships (0 = none; 9 = severe effect)	1.92	0.85	-1.05	-1.04	-1.08
How much improvement expected? (0 = 100%; 9 = no improvement)	1.49	—	—	—	—
How much improvement achieved? (0 = 100%; 9 = no improvement)	—	2.35	—	—	—

n = number of patients in group. * P<0.05; ** P<0.01; *** P<0.001; differences between males and females.

Discussion

Osteopathy is a little researched adjunct to conventional primary care. It is predominantly used by patients in their working years, especially those with spinal problems, which are often self-limiting.¹ From this study, it appeared that about three visits usually sufficed, although women attended more times than men, and the improvement in symptoms seemed agreeably high.

This is, however, a descriptive study and it cannot offer explanations. It may be that the natural history of the conditions treated would have resulted in the improvement shown, and that a placebo intervention would have been as effective as osteopathic treatment.¹¹ This possibility is less likely in view of the improvement reported by patients with symptoms of longer duration or after other non-osteopathic interventions, such as general practitioner consultations. Those patients in the most common diagnostic category, those with spinal joint strain, recorded greater symptomatic improvement than the others, and those with spondylosis appeared to improve less.

As might be expected, those patients with a shorter duration of illness episode before presenting at the osteopathic practice improved more than those with more chronic symptoms, but those with lengthy symptoms still improved. Perhaps more surprising, those who had consulted a general practitioner first (two thirds of whom were not satisfied with general practitioner care) reported greater symptom improvement from osteopathy. This was despite the longer duration of the episode, which might have been as a result of those patients trying traditional medical treatment first. However, they recorded worse symptoms before treatment, and their greater improvement may be attributed primarily to this.

It appears therefore that those patients who had consulted their general practitioner before attending the osteopath suffered more severe symptoms for longer. General practitioners should recommend that suitable patients consult their osteopath earlier

rather than later, in the case of an illness episode, and if osteopathy helps they should recommend that patients go to the osteopath first in subsequent similar episodes.

Appendix 1. The osteopathic practice's definitions of four diagnoses.

Spinal joint sprain

Inflammation of vertebral apophyseal joint, usually of sudden/acute onset. Aetiology: either a sudden movement or trauma, or repetitive trauma, usually occupational or postural. Clinical characteristics: worse for movement, better for rest; worse for heat, better for ice; rarely nerve root signs, but may have referred pain related to spinal level; may have a protective posture with scoliosis; initiating movement is usually worse than keeping moving; on palpation local tissues feel oedematous and there is muscle spasm and tenderness.

Spinal muscular problems

Usually as a result of ischaemia of large muscles with anaerobic respiration and build up of irritative metabolic by-products. Aetiology: persistent hypertonia or spasm, either protective, adaptive, occupational, or postural. Clinical characteristics: nagging diffuse pain; stiffness, especially in the morning and after resting; better for movement, may lead to 'restless legs'; better for warmth and massage; muscle feels hard and fibrous and often painful to touch.

Spondylosis

Degenerative changes in intervertebral disc causing thinning of disc space and altered mechanical relationships. Aetiology: unknown, but may be due to chronic nutritional deficiencies in the disc as it is frequently associated with trauma, reduced range of movement and other factors associated with impaired fluid exchange in the disc. Clinical characteristics: usually asymptomatic in itself, but predisposes to local tissue changes; reduced range of movement in an area of the spine generally, but any particular segment may be relatively hypermobile due to ligament slackening; this can cause instability and a secondary spondylolisthesis; on palpation the range of movement is limited but free within that range.

Disc pathologies

Prolapsed discs have severe nerve root signs and occasionally cauda equina symptoms. A herniated disc may also cause nerve root symptoms owing to either disc material pressing against the nerve root, or to fluid compression in the intervertebral foramen. Aetiology: unknown, but may be a more acute form of spondylosis. Clinical characteristics: pain on weight-bearing and jarring; scoliotic posture to reduce pressure on the weakened area; nerve root symptoms.

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