Co-ordinating health care for workers with compensable back pain improves long term functional status

Synopsis


Question: Does co-ordination of health care to encourage adoption of practices endorsed in low back pain clinical practice guidelines improve outcome? Design: Randomised controlled trial. Setting: Canadian workers' compensation insurance office. Patients: Workers absent from work for four to eight weeks due to compensable low back pain. Exclusion criteria included history of compensation for the back in previous 12 months, previous spinal surgery, multiple injuries, claims labelled as a recurrence or under litigation, pregnancy. One hundred and ten workers were randomised with 90 attending the six-month follow-up. Interventions: Subjects in the co-ordinated care group were assessed by the care team (a nurse and physician) and a plan of action established with the worker consistent with the clinical practice guidelines. The plan was explained to the worker and a summary sent to the treating physician. Assistance was provided to the treating physician in finding and scheduling appropriate diagnostic and therapeutic procedures and in liaising between worker and insurance office. Each week the nurse provided advice to each worker by phone until the worker had returned to work. Patients randomised to the control group were instructed to continue with their treating physician. Main outcome measures: Return to work was measured as the first return to work lasting more than two consecutive days. Pain and disability were assessed at baseline, three and six months using a visual analogue scale, the Quebec Back Pain Disability Scale (QBPDS), the Oswestry scale and the Dallas Pain Questionnaire. All scores were expressed as a percentage of the maximum possible score. Main results: There was a trend for faster return to work in the co-ordinated care group but this was not statistically significant (hazard ratio 1.3; 95% CI 0.8 to 1.7). At six months, the co-ordinated care group had greater improvements in all three measures of functional status (eg mean and 95% CI for between group differences in QBPDS 11.8%, 95% CI 2.5% to 21.1%). A similar trend existed for pain but this was not statistically significant (mean 10.1%, 95% CI -1.7% to 21.9%). The co-ordinated care group were more likely to be exercising at six months than the control group: Conclusion: Co-ordinating health care to encourage implementation of clinical practice guidelines provides long term improvement in workers' functional status.

Commentary

A recent review on preventing disability from work-related back pain suggested that disability is potentially preventable if the roles of the stakeholders in the injury management process can be co-ordinated (Frank et al 1998). Rossignol’s study is important because it shows that this is possible.

In New South Wales, the 1998 Workers’ Compensation Act requires the nominated treating doctor (NTD) to co-ordinate care for injured workers, with a focus on early intervention and communication with the workplace. However, a recent analysis of medical certificates for workers with compensable neck and back pain revealed that many of them included diagnoses and treatment recommendations that were not consistent with current treatment guidelines and that certificates often did not contain clear information on the worker's ability to resume work (Schonstein and Kenny 2000, Schonstein and Kenny 2001). WorkCover has recognised the problem and has called for consultants to develop strategies to motivate NTDs to attend education programs. However, attendance at education programs may not change practice.

In Rossignol’s study, early care was co-ordinated by a nurse, however there is no reason why this role could not be taken up by physiotherapists. For physiotherapists to be effective in this new role, they would need to widen their clinical management to incorporate appropriate and regular communication with NTDs, insurers, workers and their employers and thus assist the NTD to fulfil their role as the co-ordinator of the return to work process.

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References


Group cognitive behavioural intervention lowers the risk of developing long term spinal disability

Synopsis


Question: Does cognitive behavioural therapy prevent chronicity of spinal disability, when compared with standard educational strategies? Design: Randomised controlled trial with a one year follow-up. Subjects: Potential subjects were recruited from primary health care facilities and via advertisement in the local newspaper. They were 18-60 years of age, had less than three months cumulative sick leave during the past year, and had a self-perceived elevated risk of developing chronic spinal problems. Subjects were excluded if they had retired, or had medical problems which contra-indicated participation. Subjects were randomised into one of three interventions. Interventions: Educational Strategy 1 - an evaluated pamphlet concerning back pain management. Educational Strategy 2 - information packages based on a back school approach and mailed each week for six weeks. They contained advice and illustrations of good spinal health behaviours. Cognitive-behavior Therapy - a standardised, structured, six-week, small group intervention of two hours per week, involving problem solving and individual training exercises, under the guidance of trained behavioural therapists. Outcome measures: Obtained by mailed questionnaire, with follow-up at two weeks if no response. Outcomes included measures of long term sick leave (days in the last six months), visits to physicians, physical therapists, specialists, alternative health care providers or hospital in the past year, and patients’ perceptions of risk of developing long term spinal pain measured by self-report inventories (Outcome Evaluation Questionnaire, Hospital Anxiety and Depression Scale, Pain Catastrophising Scale, Tampa Scale of Kinesophobia and Fear Avoidance Behaviour Questionnaire, and six specific activities of daily living). Results: Two hundred and seventy-two subjects were included measures of long term sick leave (days in the last six months), visits to physicians, physical therapists, specialists, alternative health care providers or hospital in the past year, and patients’ perceptions of risk of developing long term spinal pain measured by self-report inventories (Outcome Evaluation Questionnaire, Hospital Anxiety and Depression Scale, Pain Catastrophising Scale, Tampa Scale of Kinesophobia and Fear Avoidance Behaviour Questionnaire, and six specific activities of daily living). Results: Two hundred and seventy-two subjects were randomised (70 in pamphlet group, 66 in information package group, 107 in cognitive behavioural therapy group). Two hundred and thirteen completed the study (22% dropout). The cognitive behavioural therapy group showed a significant reduction in health care visits (from 1.1 to 0.6 visits to a physician and from 3.4 to 2.6 visits to the physical therapist) compared with an increase in number of visits in the other two groups. The risk of long term sick leave (> 30 days) was lower in the cognitive behavioural therapy group than in combined pamphlet and information package groups (1.1% vs 10.4%; RR 9.3, 95% CI 1.2 to 70.8). The cognitive behavioural therapy group had significantly less sick leave (mean 2.6 days) than the pamphlet group (mean 13.0 days), but not compared with the information package group (mean 19.4 days). Effects on other outcomes were not statistically significant. Conclusion: Directed cognitive behavioural group therapy significantly reduces health care visits and sick leave when compared with educational approaches of a pamphlet and packages mailed once a week for six weeks.

Commentary

The need for early intervention in the management of chronic problems is widely recognised. This article is a randomised controlled trial of three interventions: a cognitive behaviour group, a pamphlet information and an information package for patients with chronic low back pain. These early interventions aimed to empower the patient rather than medicalise the problem.

The results highlight information for use in clinical practice. Self reports of reading written material were 83% and 73% for two groups, but the response to a randomly placed offer of a free cinema ticket gave the adherence at 36%. The authors conclude that one-third of the participants read the material and approximately one quarter reported the information to be helpful. This, combined with the findings for the research on health care use, is interesting. The two information groups reported an increase in the number of visits to a physician or a physiotherapists relative to pre-test data, whereas the cognitive behavioural therapy group reported a significant decrease.

Overall, the cognitive behaviour therapy group achieved the best result of the three interventions, with a ninefold reduction in the risk of taking long-term sick leave. The authors contend that providing self-help-oriented interventions can prevent chronic problems. This model is considered to have applicability to a variety of health care settings, including the primary care level.

The challenge for physiotherapists is to apply this model in a one-to-one setting. The cognitive behaviour therapy group provided sessions on causes of pain, managing pain, promoting good health, adapting for leisure and work, controlling flare-ups and maintaining and improving results. Physiotherapists are well placed to provide tailored written and verbal information on these aspects in their treatments. Further, the finding of a significant improvement for the cognitive behaviour therapy group can be used as a powerful argument as to the efficacy of our treatments and approaches.

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Bandaging and subsequent elastic hosiery is more effective than elastic hosiery alone in reducing lymphoedema

**Synopsis**


**Question:** Is the combined use of multi-layer bandaging and elastic hosiery more effective than hosiery alone in reducing limb volume in patients who have lymphoedema following cancer treatment?

**Design:** Randomised controlled trial. **Setting:** English lymphoedema clinics. **Patients:** Subjects who had developed lymphoedema following cancer treatment. Inclusion criteria were no sign of active disease 12 months post treatment and an affected limb at least 20% greater in volume than unaffected limb. Exclusion criteria included bilateral lymphoedema, paralysis and compromised arterial flow. Ninety patients were randomised, 85 completed the treatment as allocated and 83 attended follow-up. **Interventions:** Subjects in the combined treatment group had an 18-day course of bandaging followed by provision of elastic hosiery, whereas the hosiery alone group received their garments on Day 1. The multi-layer bandaging consisted of stockingette, a retention bandage on digits, foam, padding, and then short-stretch extensible bandages. Upper limbs received one layer of bandages, lower limbs two. The bandages were worn continuously for 24 hours per day and were changed daily. Elastic hosiery was customised to each patient, with patients asked to wear the garment while awake. Arm sleeves were replaced every three to four months, lower limb sleeves every six months. **Main outcome measures:** Limb volume was measured at Day 1, Day 19, Week 7, Week 12 and Week 24, either with an optoelectronic device or by manual surface measurements. Excess limb volume was measured by subtracting the volume of the unaffected limb from the affected limb. Treatment efficacy was measured by percentage reduction in excess limb volume.

**Main results:** The reduction in excess volume averaged over all observation periods was greater in the bandaging and stocking group (mean reduction 30% of initial limb volume, or 67% of initial excess limb volume) than in the stocking alone group (mean reduction of 15.2% of initial volume). The mean and 95% confidence interval for between-group differences in limb volume was 14.8% (6.0-23.6%).

**Conclusion:** Multi-layer bandaging followed by elastic hosiery is more effective than hosiery alone in reducing excess limb volume in patients who have lymphoedema following cancer treatment.

**Commentary**

Complex physical therapy (CPT) consists of lymphatic massage, compression bandaging, skin hygiene and active exercises. There is some evidence to show the effectiveness and safety in the short and long term when these four components are administered together (Hwang et al 1999). However, the relative efficacy of each of the components of this comprehensive treatment program has not been determined. A search of the literature does not reveal a similar study comparing the effect of multi-layer bandaging with hosiery in the treatment of lymphoedema.

The authors are to be commended on this interesting study, but there is a potential for misinterpretation of the results, which could have an adverse effect on the clinical applications. Lymphoedema is a high protein oedema, and it is of paramount importance to ensure that treatment removes the oedema completely from the body, as is achieved by administering the four components of CPT. It has been shown that volume reduction of a lymphoedematous limb may be achieved when either bandaging or hosiery is applied in isolation without lymphatic massage. However, Földi et al (1985) have suggested that this reduction is caused by reabsorption of the fluid part of the oedema only, not the stagnating proteins which are the prime cause of the oedema. The protein concentration in the limb is thereby increased, worsening the condition.

If the results of this study are misinterpreted, inexperienced clinicians may be led to believe that multi-layer bandaging alone can be used as a standard treatment of lymphoedema. This is not recommended.

**References**
