forced expiratory volume, forced vital capacity, or peak expiratory flow rate. These factors depend on airway and costal cage resistance, which osteopathic manipulative treatment could address by balancing autonomic tone to dilate the bronchial airways and improve compliance of the costal cage. (doi:10.7556/jaoa.2017.059)

Fran Nanadiego, BA  
Michael A. Seffinger, DO  
Western University of Health Sciences College of Osteopathic Medicine of the Pacific, Pomona, California  

Cost-Effective Management of Low Back and Joint Pain by Specialty


Back and joint pain are common ailments that are managed by various health care professionals. Researchers at the University of Nebraska Medical Center in association with The Osteopathic Research Center at the University of North Texas Health Science Center compared the cost-effectiveness of improving patient outcomes across specialties with average total costs of treatments from health care professionals. The researchers used data from the Medical Expenditure Panel Survey, which is a nationally represented survey that collects data on respondents’ health status and health care use and expenditures conducted by the Agency for Healthcare Research and Quality. To assess health benefit, self-reported measures of physical health and mental health were analyzed to derive EuroQol-5D (EQ-5D) index scores, which measure the health-related quality of life domains of mobility, self-care, usual activities, pain/discomfort, and anxiety/depression.

A total of 16,546 Medical Expenditure Panel Survey respondents from 2002 to 2012 who had at least 1 office-based health care professional visit for a diagnosed low back or joint problem were included in the study. All respondents included were aged 18 years or older. Respondents who received treatment for back or joint pain from more than 1 health care professional were excluded. The study compared physicians in the following specialties: osteopathic medicine, internal medicine, orthopedics, rheumatology, neurology, family/general practice, and nonphysician health care professionals: chiropractors, physical therapists, acupuncturists, and massage therapists. The age-adjusted results, based on incremental cost-effectiveness ratios using the EQ-5D index scores, showed that osteopathic medicine, family medicine, and internal medicine were the most cost-effective. Chiropractors, physiotherapists, acupuncturists, and physicians in the specialties of orthopedics, neurology, and rheumatology were not cost-effective.

In summary, for patient-reported overall health based on combined physical and mental components, the specialties of family medicine, osteopathic medicine, and internal medicine were the most cost-effective in treating low back and joint pain. (doi:10.7556/jaoa.2017.060)

Christina Bohr, OMS IV  
Michael A. Seffinger, DO  
Western University of Health Sciences, College of Osteopathic Medicine of the Pacific, Pomona, California

Benefit of OMT in Patients Who Underwent Heart Surgery


Researchers from the Cardiology Rehabilitation Center at the Santa Maria Nascente Institute in Milan, Italy, evaluated the effects of osteopathic manipulative therapy (OMTh; manipulative care
provided by foreign-trained osteopaths) combined with standard cardiorespiratory rehabilitation care compared with standard cardiorespiratory rehabilitation care alone for patients who underwent heart surgery. Eighty patients who underwent elective heart surgery using sternotomy for coronary artery bypass grafting, valve replacement or repair, or ascending aorta surgery were randomly assigned to the OMTh or standard care group on admission to the rehabilitation center. Patients were aged 18 years or older and capable of providing informed consent. Exclusion criteria included a history of heart surgery with minithoracotomy, heart transplant, or implantation of ventricular assistance; diabetes mellitus; autoimmune disease; or altered cognitive capabilities. The groups were evenly matched for age, sex, demographics, type of cardiac surgery, and comorbid conditions.

All patients received a supervised rehabilitation program, which began 24 hours after admission and continued throughout hospitalization. The patients in the OMTh group received OMTh on admission to the cardiac rehabilitation unit, which was the day after they were discharged from the hospital. The OMTh was administered for 5 days, for approximately 15 minutes per session. The OMTh procedures used were myofascial release to the diaphragm and sternal and thoracic inlet areas.

Outcome measures included pain intensity measured by a visual analog scale (VAS), functional respiratory capacity, and the hospital length of stay. On entry to the rehabilitation center, the mean inspiratory volume was 744 mL for the OMTh group and 825 mL for the standard care group. Both groups had a statistically non-significant pain VAS score of 4 at the time of admittance to the rehabilitation unit. At the end of rehabilitation, the median VAS score was 1 for the OMTh group and 3 for the standard care group (P<.01). The mean (SD) inspiratory volume at the time of discharge was 1781 (633) mL for the OMTh group and 1400 (588) mL for the standard care group (P<.01). The mean (SD) hospital length of stay was shorter in the OMTh group than in the standard care group (19.1 [4.8] days vs 21.7 [6.3] days, respectively; P<.05).

The researchers concluded that the addition of OMTh probably increased the rate of recovery by reducing pain and improving physiologic function of chest cavity structures. These results support previous findings on the application of OMT by osteopathic physicians to manage symptoms in similar patients.1,2 These results add to the growing evidence that OMTh has significant benefits in the management of systemic disorders and physiologic dysfunctions, in addition to musculoskeletal conditions. (doi:10.7556/jaoa.2017.061)

Hollis H. King, DO, PhD
University of California, San Diego School of Medicine

References

Addition of Osteopathic Visceral Manipulation to OMT for Low Back Pain Decreases Pain and Increases Quality of Life


Turkish researchers from the Department of Physiotherapy and Rehabilitation at Hacettepe University in Ankara, Turkey, compared the effects of osteopathic manipulative therapy (OMTh; manipulative care provided by foreign-