Health economy analyses are increasingly important to document economic aspects of surgical fracture treatment, and are particularly rare in Latin America. AO Clinical Investigation has conducted a retrospective cohort cost-effectiveness study of surgical vs non-surgical treatment of fractures in Chile.

Paula Sotelo and Beate Hanson

Costs and Cost-Analysis in Fracture Osteosynthesis Treatment

Clinical information, direct costs of medical treatment, and the costs of disability compensation were collected for cases of occupational injuries that resulted in spinal, pelvis, distal radius, scaphoid, proximal humerus, diaphyseal tibia or ankle fractures between January 1, 1999, and December 31, 2002. Each case was retrospectively followed for 18 months. A total of 413 patients were included in the study (73.4% male, 51% surgically treated).

Overall, surgical treatment was more expensive compared to non-surgical treatment for all fracture types. This was due to higher costs of surgical treatment and operation expenses and inpatient hospitalization. At the same time, the surgical cases did not have shorter sick leave periods.

The limitations of this analysis are in differences of severity between the surgical and nonsurgical cases. More specifically, surgical cases were more severe than the non-surgical cases.

We attempted to perform a stratified analysis using the Müller AO Classification of fractures. The stratified analysis showed that surgically treated AO 42-A diaphyseal tibia fractures have shorter sick leave periods with lower indirect costs. These findings corroborate with earlier reports from the literature (Toivanen et al, 2000, and Downing et al, 1997).

Fracture classification is important for proper comparison of fracture treatment costs in non-randomized studies. Regional differences in medical treatment costs and amounts of disability compensation fees limit the transferability of cost-effectiveness findings. Patient-reported outcomes are important dimensions of cost analysis. Further studies in this growing area of fracture treatment research are necessary.

Bibliography