Patient Centered Outcome Measures in Spine Surgery

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Introduction

Patient centered health measures have become the gold standard to assess efficacy of surgical spine procedures and are an essential component of cost-effectiveness research. Currently, however, there is an expansive range of patient reported outcome instruments without an established consensus as to which should be used for a particular diagnosis or procedure. There is currently no agreement as to what patient reported outcome instruments should be used in spine surgery. This study aims to assess incidence, trends and use of patient centered outcome measures in spine research.

Methods

A search was conducted on PubMed from 2004-2013 of five orthopaedic journals (The Journal of Bone and Joint Surgery American Volume, The Bone and Joint Journal [formerly JBJS British Volume], The Spine Journal, The European Spine Journal and Spine). All abstracts were inspected for spine surgery and inclusion of patient reported outcome instruments. Articles were then analyzed for diagnosis, procedure and level of evidence. Prevalence of specific outcome instruments and level of evidence were reported as percentages of total studies included.

Results

From a total of 19,736 article published, we identified 1,090 articles meeting our study criteria with most coming from Spine (43.9%). 4.6% of these articles came from The Bone and Joint Journal. Overall, there were 115 distinct outcome measures used. The top six most used outcome measures in descending order were: Visual Analog Scale (45.9%), Oswestry Disability Index (36.8%), Short Form-36 (16.7%), Japanese Orthopaedic Association (JOA, 15.8%), Neck Disability Index (NDI, 6.8%), and Scoliosis Research Society-22 (SRS-22, 6.4%). Most articles were of Level IV evidence (32.8%), while 14.9% of all articles were of Level I evidence.

Learning Objectives

1)Improve understanding on patient reported outcomes and their usage
2)Appreciate the existence of a large amount of patient reported outcome instruments in spine surgery
3)Appreciate the need to consolidate and determine the most valuable PRO instruments to be used in the future so to have more standardized research

Conclusions

The breadth of patient centered outcome measures in spine surgery research is extensive. A consensus may be needed to consistently use a fewer number of most relevant instruments for a given pathology or procedure for more effective communication and comparison without overburdening patients.