Cost-utility Study And Life Quality Improvement After Instrumented Lumbar Fusion In Elderly Patients Over 80 Years Old

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Cost utility in the treatment of degenerative aging spine

- Spinal surgery LBP is one of the most rapidly growing surgical disciplines in medicine, substantially increasing health care costs.

- Debate is still continuing on the efficacy of surgery to cure LBP Vs. natural history and non-operative treatment.

In an age of limited financial resources, there is an increasing demand not only to analyze the therapeutic efficacy of the treatment modalities but also to consider related economic and societal costs.

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- Quality Adjusted Life Year (QALY) Scale
  - A quality-adjusted life year (QALY) is a measure of a person's life expectancy and the quality of the remaining life-years.
  - A QALY gives an idea of how many extra months or years of life of a reasonable quality a person might gain as a result of treatment.

How is quality of life measured?
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Determination of a specific dollar value threshold for appropriate medical treatment.

- The UK is believed to have a threshold of £30,000 per QALY (twice the mean income):
  • Any health intervention with an incremental cost of more than £30,000 per additional QALY gained is likely to be rejected
  • And any intervention with an incremental cost of less than £30,000 per extra QALY gained is likely to be accepted as cost-effective.

- In USA a figure of $50,000 per QALY is often considered cost effective.

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The aim of our study is to determine the clinical, functional improvement and QALYS gained in elderly patients over 80 years old undergoing lumbar instrumented arthrodesis during a 2-year period.

- Retrospective study
- 25 patients older than 80 years of age
- Underwent 1-2 levels instrumented spinal fusion
- Symptomatic Spinal Stenosis
- Determine the cost/QALY gained during a 2-year period across the HRQOL 6D SF36.
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- Perioperative Complications: 1 dural tear; 1 superficial + 2 deep wound infections (reop); 1 transient radiculalgia
- Follow-up Complications: 1 sacral insufficiency fracture; 2 adjacent disc disease
- 2 patients died of unrelated causes during follow-up.
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- There was a statistically significant improvement in the Oswestry Disability Index from a mean preoperative value of 61.8 to 31.8 at final follow-up.
- The mean health utility value gained over the 2-year postoperative showed a cumulative 0.60 QALY improvement.
This study demonstrates significant functional improvement after instrumented lumbar fusion in elderly patients >80 years old despite a high postoperative complication rate.

There is a growing demand not only to examine the efficacy of the treatment modalities but also to consider the related economic and social costs.
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