Abstracts

PHC4

COST-EFFECTIVENESS OF HARMONIC SCALPEL USE VERSUS CONVENTIONAL TOTAL THYROIDECTOMY
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OBJECTIVES: To assess efficacy, safety and cost-effectiveness of ultrasonic dissector, Harmonic Scalpel (HS) versus conventional non video-assisted thyroidectomy (nHS), from hospital and societal perspectives.

METHODS: A total of 198 patients eligible for total thyroidectomy (TT) were randomly assigned to surgery with HS(96) or nHS(102) and followed until 3 months after discharge. Main clinical outcomes were: pain (VAS score), complications, cosmetic results. Direct medical and indirect costs were prospectively collected as well.

RESULTS: HS led to shorter operative time (HS:54.16 vs nHS:76.36 minutes, P<0.001), as total operative room (OR) occupation time (76.86 vs 100.59 minutes, P<0.001). QoL was better in HS-group one month (0.90 vs 0.83 ; P<0.002), and 3 months after surgery (0.91 vs 0.84; P=0.002). Less postoperative pain was perceived by HS patients 6 hour after surgery (HS: 41.35 vs nHS: 44.56) but similar after 48 hours (HS: 22.75 vs nHS:20.97). A total of 71% HS patients were satisfied with cosmetic result versus 55% nHS (P=0.029).

A significant difference resulted in complications rate and voice changes. Total medical direct costs were €2400.34 and €2340.52 for HS and nHS, respectively. From hospital perspective HS offers a cost saving of € 119/patient, mainly due to less charges of OR personnel (HS: €294.19 vs nHS: €452.90), OR occupancy (HS: €620.61 vs nHS: €815.40), drugs (HS: €63.29 vs nHS: €93.28), and diagnostic exams (HS: €132.91 vs nHS: €160.36).

The comparison between MIS and conventional THA was similar.

PHC3

COST AND QUALITY IMPROVEMENTS ASSOCIATED WITH MINIMALLY INVASIVE SURGERY (MIS) TOTAL HIP ARTHROPLASTY (THA)
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OBJECTIVES: MIS THA techniques have shown treatment advantages over conventional THA—particularly in terms of reduced hospital stay and rehabilitation time—key issues influencing the costs of THA. However, relatively few economic studies have been conducted in this area.

METHODS: Cost data from 224 patients, 140 undergoing MIS hip procedures and 84 undergoing conventional THA in two German orthopaedic centres were analyzed. Actual costs associated with MIS and conventional THA were compared, including staff, hospital overheads and general costs. Differences in costs of prosthetic hip implants were identified as a potential source of bias and were therefore excluded from calculations. Comparisons across 12 quality indicators were made between THAs conducted in one German hospital with the MIS technique, and the overall German average from 2006 (published by the German Federal Office of Quality Assurance [BQS]).

RESULTS: MIS technique was associated with 28.5% lower total costs than conventional THA. Cost savings were predominantly due to shorter duration of hospital stay, shorter operation time, shorter post-operative care, and associated lower costs for nurses, physiotherapists and overheads. The two patient populations in the cost analysis had similar baseline demographics. Regression analyses showed that 94% of the difference between the two samples was an effect of surgical technique; 16% might be caused by age and gender (R2 = 0.67).

A significant difference resulted in complications rate and voice changes. Total medical direct costs were €2400.34 and €2340.52 for HS and nHS, respectively. From hospital perspective HS offers a cost saving of € 119/patient, mainly due to less charges of OR personnel (HS: €294.19 vs nHS: €452.90), OR occupancy (HS: €620.61 vs nHS: €815.40), drugs (HS: €63.29 vs nHS: €93.28), and diagnostic exams (HS: €132.91 vs nHS: €160.36). No statistical difference was found in loss of productivity up to 3 months (HS: €385.51 vs nHS: €377.71).

CONCLUSIONS: Harmonic is safe and efficacious in conventional TT, allowing a significant reduction of the operative time (~22 min), total OR occupation time (~24 min), and better QALY at 3 months (HS:0.23 vs nHS:0.21), without increasing complications rate and saving €119 from a hospital perspective. Harmonic should be adopted in TT to reduce impact on individual life and on society.

PHC5

A COST-EFFECTIVENESS ANALYSIS OF RHBMP-2 IN SPINE FUSION SURGERY IN THE NETHERLANDS
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OBJECTIVES: Chronic low-back pain related to osteoarthritic changes of the lumbar spine has a significant economic impact on health care budgets worldwide. Anterior-Lumbar-Interbody-Fusion (ALIF) surgery can be an effective treatment option after non-operative therapy fails. Frequently, the affected vertebrae are