Zusammenfassung der Master-Thesis
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Chirurgische Rekonstruktion oder konservative Behandlung der vorderen Kreuzbandruptur - Eine Kosten-Effektivitäts-Analyse

Background: The decision whether or not to surgically reconstruct a torn anterior cruciate ligament (ACL) of the knee is an ongoing subject of debate. The high prevalence and associated public health burden of the event has led to continuous efforts to determine the best therapeutic approach. A critical evaluation of benefits and expenditures of both treatment options as in a cost effectiveness analysis providing valuable information for treating physicians and health care policy makers seems emerging.

Methods: A systematic literature review identified 4 out of 7410 articles providing sufficient outcome probabilities on simultaneously both treatment options for modeling. A transformation key based on expert opinion of 27 orthopedic surgeons was used to derive utilities from available evidence. Cost data of either treatment strategy were based on average figures of the first author's institution and reinforced by the Swiss national statistics. A decision tree was constructed to derive cost effectiveness of each strategy and tested for robustness using Monte-Carlo simulation.

Results: Decision tree analysis revealed a cost effectiveness of 16'038 USD/ 0.78 QALY for ACL reconstruction and 15'466 USD/0.66 QALY for conservative treatment which resulted in an incremental cost effectiveness of 4'890 USD/QALY for ACL reconstruction. Sensitivity analysis of utilities did not change the trend.

Conclusion: ACL reconstruction for reestablishment of knee stability seems cost effective in the Swiss setting based on the currently available evidence. This, however, should be reinforced with randomized controlled trials comparing both strategies.