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Multimedia support for improving preoperative patient education:

A randomized controlled trial using the example of radical prostatectomy

Promotionsfach: Urologie

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A basic understanding of the planned surgical procedure is necessary for valid informed consent and might be eased by better visualisation. Therefore, we supported the preoperative consultation before radical prostatectomy with a computer-based multimedia tool and examined the effects in a randomised controlled trial.

We included German-speaking patients scheduled for radical prostatectomy at our centre. When consenting they were block-randomised to receive either a multimedia-supported or a standard consultation on the day before surgery. The multimedia tool was navigated by the physician during the talk and included illustrations, short videos, and only some written information. Its content covered anatomy, the surgical procedure, side-effects, and the general treatment course. Outcomes were measured in a structured interview within 6 to 10 hours after the consultation. Primary outcome was patient satisfaction. Moreover, we applied validated instruments to determine anxiety (STAI) and measures of decision-making (COMRADE). Results were given by mean and standard deviation. For comparison of groups we used Student's t-test and chi-square test. Moreover, we performed explorative analyses using multivariate logistic regression to identify predictors of complete satisfaction. We registered the study in the German Clinical Trials Register (DRKS00000096; www.germanctr.de).

We successfully randomised 203 patients to receive multimedia support (n=102) or standard care (n=101). The multimedia-software was used without any problems. With regard to demographic data, there was no difference between the groups. Mean age was 63.4 ± 7.1 years, initial PSA 9.3 ± 10.6 ug/l, and Gleason score 6.6 ± 0.8 . We found that multimedia support significantly improves patients' satisfaction with preoperative education for radical prostatectomy: In the MME group 70/102 (68.6%) patients reported complete satisfaction with preoperative education compared to 52/100 (52%) in SE (p=0.016). The scores for anxiety, perception of risk-communication, and confidence in the decision were comparable. 98.5% of the patients (200/203) asked all the questions they wanted to pose with patients from the multimedia group having asked more questions (5.7 vs. 4.2, p=0.018).

We did not measure a change in objective knowledge, but subjectively perceived knowledge was higher after MME. There was no difference concerning the duration of preoperative talks (18.9 ± 5.1 minutes). The intervention proved to be well applicable in clinical routine and did not prolong the procedure. Patients' judgement on the multimedia tool was very positive and suggested additional online-availability as a possible improvement.

By using multimedia support patients are more actively involved in the preoperative consultation and their satisfaction is improved. Once implemented, it can easily be integrated into clinical routine and does not prolong the procedure. Therefore, multimedia support should be considered worthwhile for improving preoperative talks – especially before frequent and standardised procedures that involve possibly serious consequences.