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INFLUENCE OF RADIATION THERAPY OF PROSTATE CANCER ON THE RESULTS OF ARTIFICIAL URINARY SPHINCTER IMPLANTATION FOR POST-PROSTATECTOMY INCONTINENCE

Hypothesis / aims of study
Literature shows contradictory statements concerning the influence of radiation therapy of prostate cancer on the outcome of artificial urinary sphincter implantation (AUSI). Our aim was to show the results of implantation of an artificial urinary sphincter (AUS) in our own patients in relation to additional external radiation therapy (RT) .

Study design, materials and methods
Our retrospective study comprised 89 patients (mean age 69.1 y) who underwent implantation of an AUS (AMS 800, bulbar cuff) for post-prostatectomy urinary incontinence (PPI) caused by urinary sphincter insufficiency. Mean follow-up was 32 months. A detailed clinical history was taken. Assessment of incontinence included the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF) and the daily number of pads used.

Results
59 patients had no history of radiation therapy (group I). 30 patients had an additional external radiotherapy (group II): 23 patients before implantation of AUS (group IIa) and 7 patients secondary after implantation of AUS because of prostate cancer relapse (group IIb). All groups showed significant improvement in ICIQ-SF-score, daily number of pads and quality of life after AUSI. There was only a slightly difference between postoperative ICIQ-SF-score in group I and II (5.0 vs. 6.7). Normal function rate of the AUS was signficant higher in group I than in group II (94,7% vs. 75,9%). There was no significant difference in complication rate and AUS-function rate between group IIa and IIb. The AUS-implantation showed a high acceptance among the patients of all groups: 90-95% of all patients would decide again in favour of the operation.

Interpretation of results
The implantation of an artificial urinary sphincter for post-prostatectomy incontinence has good results concerning continence rate and quality of life in patients with and without additional radiotherapy . The complication rate and and AUS-explantation rate is significant higher in patients with radiotherapy.

Concluding message
The factor of additional radiotherapy in patients with post-prostatectomy urinary stress incontinence should not cause withholding artificial sphincter implantation therapy.

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require ethics committee approval because	**no clinical trial, no experimental therapy**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**