

PE03 Comorbidity and BMI as independent risk factors for high-grade complications after robotic-assisted radical prostatectomy

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Introduction & Objectives: Robotic-assisted radical prostatectomy (RARP) is the most common procedure for the treatment of localized prostate cancer (PCa). While oncological outcomes of this procedure are excellent, focus has been drawn to limiting long-term side-effects and peri-operative complications. In this series we evaluated data on peri-operative complications to gain insight in incidence of relevant complications within 30 days following RARP in relation to the patient and tumor characteristics, in order to improve pre-operative selection and counseling.

Materials & Methods: Peri-operative complications were grouped by the Clavien-Dindo (CD) classification and related to patient and tumor characteristics, oncological parameters and procedure specific parameters. If patients experienced multiple complications, the highest grade was scored. Patients with a high-grade complication (CD>2) were compared to those with no or minor complications. A univariate and multivariate logistic regression model was used to identify risk factors for the incidence of high-grade complications.

Results: From September 1st, 2016 until December 31st, 2019, 846 consecutive men underwent RARP in a single center. All procedures were performed by experienced surgeons. Fifty-eight men (6.9%) experienced a CD >2 complication. Of these, 21 (2.5%) experienced a grade 3A, 22 (2.6%) a grade 3B, 14 (1.7%) a grade 4A and 1 (0.1%) a grade 4B complication. In 54 (6.4%), it concerned surgical complications like urinary leakage and wound dehiscence and in 4 (0.5%) medical complications like myocardial infarction and pulmonary embolism. Body Mass Index (BMI), age-unadjusted Charlson Comorbidity Index (CCI), EAU risk-group and extended pelvic lymph node dissection (ePLND) being univariate statically significant risk factors, were used in a multivariate logistic regression model. Patients with a CCI of 1 or more were grouped due to low incidence of CCI ≥ 2 . The full model was statistically significant, $\chi^2(5, N=844) = 33, p < 0.001$. The CCI ≥ 1 (OR 2.0, 1.1-3.5 95% CI) and BMI (OR 1.1 per point increase, 1.01-1.2 95% CI) were the only independent risk factors of high-grade complications upon multivariate analysis.

Conclusions: A substantial short-term high-grade complication rate was established following robot assisted radical prostatectomies (RARP). Comorbidity and an increasing BMI were independent risk factors for occurrence of high-grade complications.