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Introduction: Radiation therapy (RT) can predispose the onset of corporal fibrosis and microvasculopathy. The impact of RT on intra-operative complications is not well described in the literature.

Objective: In this study, we assess intra-operative and post-operative outcomes among patients with or without prior history of RT following primary Inflatable Penile Prosthesis (IPP) implantation.

Methods: We performed a multicenter, retrospective analysis of men undergoing primary IPP placement between January 2015 and December 2022. A total of 3530 patients were identified, of which 3319 had no prior history of RT and 211 patients had history of RT. After 1:1 propensity score matching for all confounding variables, 211 patients with a history of RT were compared to 211 nonradiated patients for intra-operative and post-operative outcomes. Chi-square and Mann-Whitney tests were used for statistical analysis for categorical and continuous variables respectively. For multivariable analysis, we used a forward stepwise model and included significant variables found on pre-operative characteristics of patients. Kaplan-Meier time to event analysis were compared with Mantel-Cox log-rank test.

Results: Patients with history of RT encountered more intra-operative complications (4.3% vs 0.9%, $p=0.032$); specifically, these men experienced more distal crossover events (1.9% vs 0, $p=0.044$). On multivariable analysis, history of prior RT (OR 5.29, 95% CI 1.07-26.3, $p=0.041$) and diabetes mellitus (OR 10.5, 95% CI 2.58-43.5, $p=0.01$) were associated with increased risk of intra-operative complications. History of obesity (OR 0.11, 95% CI 0.01-0.91, $p=0.040$) reduced risk of intra-operative complications. There was no significant difference in early or late post-operative non-infectious complications between both groups and there was also no significant difference in risk of post-operative complications within 24 months on Kaplan Meier analysis (log rank $p=0.9$).

Conclusions: In this large multi-institutional cohort, history of RT is an independent predictor of intra-operative complications but not post-operative complications during primary IPP placement. These findings may help inform patient-specific counseling while guiding surgical planning to prevent untoward morbidity following surgery.

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(181) PRIOR RADIATION THERAPY IS ASSOCIATED WITH INCREASED RISK OF INTRA-OPERATIVE COMPLICATIONS IN PATIENTS UNDERGOING PRIMARY INFLATABLE PENILE PROSTHESIS PLACEMENT: RESULTS FROM A LARGE MULTI-INSTITUTIONAL COLLABORATIVE

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