

Perioperative Morbidity and Mortality Related to Radical Cystectomy: A Multi-institutional Retrospective Study in Japan

Introduction and Objective: At present, most studies on the complications associated with open radical cystectomy were derived from Western academic high volume centers and data from Japan and other Asian countries were very limited. We sought to determine the type, incidence, and severity of the 90-day morbidity following radical cystectomy in our institution and our affiliated hospitals according to a standard reporting methodology.

Materials and Methods: A retrospective multi-institutional study. We reviewed the records of 928 patients who underwent open radical cystectomy between 1997 and 2010. All complications within 90-days of surgery were categorized into 11 specific categories and graded according to the modified Clavien system. Multivariate regression models were used to determine predictors of complications.

Results: At least 1 complication was observed in 635 patients (68%) and a major (grade 3-5) complication was observed in 155 patients (17%). The most common complication categories were infectious (30%), gastrointestinal (26%), wound-related (22%), and genitourinary (16%). The 30-day mortality rate was 0.8% and the 90-day mortality rate was 2%. A multivariate regression model showed that prior cardiovascular comorbidity and type of urinary diversion (ileal conduit or neobladder) were significant factors for any and major complications.

Conclusions: Surgical complication related to radical cystectomy is significant, and prior cardiovascular comorbidity and type of urinary diversion were significant factors for any and major complications. The 90-day mortality rate was 2%, which was compatible with reports from Western high volume centers.