

**UROLOGICAL ONCOLOGY** \_\_\_\_\_

**The value of a second transurethral resection in evaluating patients with bladder tumours**

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Objectives: To evaluate the usefulness of a second transurethral resection for superficial and muscle-invasive bladder tumours.

Methods: A review of the literature relevant to repeat resection for bladder tumours was conducted using Medline Services.

Results: Transurethral resection of the bladder has two shortcomings: underestimating clinical stage, and overlooking other lesions. A second transurethral resection, when performed 2-6 weeks after the initial resection, corrects clinical staging errors in 9-49% of cases and detects residual tumor in 26-83% of cases. A second resection is particularly warranted for T1 tumours since 2-28% of them prove to be muscle-invasive, thus requiring a change in management. For muscle-invasive tumours, a second resection may be performed only if bladder sparing is being considered, as it helps to exclude the presence of tumor sites contra-indicating conservative treatment.

Conclusions: A second transurethral bladder resection may be warranted for T1 tumours, and for invasive tumours when a bladder preservation is planned.

### Editorial Comment

The authors performed Medline-based review of the literature and which all papers on value of a second transurethral resection in superficial bladder tumours were evaluated. This is a timely and important paper as it condenses the known facts on the value of a second transurethral resection into one well-founded argument: Do it! At second TUR residual tumours are detected between 4 and 78% and, especially in T1-tumours range from a minimum of 33% to maximum of 78%. The stage of tumours is underestimated in 9-49% of tumours at first resection. The interval recommended in this paper is between 2 and 6 weeks, with no benefit in waiting more than 2 weeks. From our personal experience the interval of 1 week is also possible without an increase in complications. Morbidity is not increased significantly with the second TUR. In conclusion, this paper further underlines the importance of a second transurethral resection, especially in T1-tumours.

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### **A study of the morbidity, mortality and long-term survival following radical cystectomy and radical radiotherapy in the treatment of invasive bladder cancer in Yorkshire**

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Objectives: To study the morbidity of radical cystectomy and radical radiotherapy in the treatment of patients with invasive carcinoma of the bladder and to report the long-term survival following these treatments.

Patient and Methods: 398 patients with invasive carcinoma of the bladder treated between 1993 and 1996 in the Yorkshire region were studied. Of 398 patients studied, 302 patients received radical radiotherapy and 96 underwent radical cystectomy. A retrospective review of patients' case notes was performed to construct a highly detailed database. Crude estimates of survival differences were derived using Kaplan-Meier methods. Log-rank tests (or, where appropriate, Wilcoxon tests) were used to test for the equality of these survivor functions. These functions were produced as all-cause survival. The proportional hazards regression modeling was used to assess the impact of definitive treatment on survival. A backwards-stepwise approach was used to

derive a final predictive model of survival, with likelihood ratio tests to assess the statistical significance of variables to be included in the model.

**Results:** The patients undergoing radiotherapy were significantly older (mean age: 71 years versus 66 years), but no difference was identified in the distribution of American Society of Anesthesiologists (ASA) grades in the two treatment groups. The stage distribution of cases in the treatment groups was not significantly different. Significant treatment delays were observed in both treatment groups. The median time from being seen in the clinic to transurethral resection of bladder tumor (TURBT) and subsequent radical treatment (cystectomy or radiotherapy) was 4.3 and 9 weeks, respectively. Age was the most significant independent factor accounting for treatment delays ( $p < 0.001$ ). The 30-day and 3-month treatment-associated mortality for radical cystectomy and radiotherapy was 3.1% and 8.3% and 0.3% and 1.65%. Of the patients who received radiotherapy, 57 (18.8%) were subsequently subjected to a salvage cystectomy. For these 57 patients, 30-day and 3-month mortality after the salvage cystectomy were 8.8% and 15.7%. Gastrointestinal complications were the major source of early morbidity after primary and salvage cystectomy. Bowel leakage occurred in 3% following radical and 8.7% after salvage cystectomy. Bowel complications (leakage and obstruction) were the major cause of death following salvage cystectomy. No specific cause was predominant in those undergoing radical cystectomy with intestinal anastomotic leakage and urinary leakage accounting for one death each. Exacerbation of co-morbid conditions accounted for the remaining causes of mortality. Urinary leakage occurred in 4% following both forms of cystectomy. Recurrent pyelonephritis and intestinal obstruction were responsible for the majority of complications in the follow-up period. Bladder and gastrointestinal complications accounted for the majority of complications following radical radiotherapy. Some degree of irritative bladder and rectal were noted commonly. Severe bladder problems, which rendered the bladder non-functional or required surgical correction, occurred in 6.3% of patients. 2.3% of patients underwent surgery for bowel obstruction related to radiotherapy induced bowel strictures. Following radiotherapy, 43.6% of patients had a recurrence in the bladder at varying intervals post-treatment. Of these, 40% had  $\geq T2$  disease. The 5-year survival following radiotherapy (with or without salvage cystectomy) was 37.4% while 36.5% of patients were alive 5 years after radical cystectomy. There was no statistically significant difference in the overall 5-year survival figures between the two primary treatments. Tumor stage, ASA grade and sex were the only independent predictors of 5-year survival on multivariate analysis.

**Conclusions:** This retrospective regional study shows that there is no significant difference in the 5-year survival of patients with invasive bladder cancer treated with either radical radiotherapy or radical cystectomy. All forms of radical forms of radical treatment for bladder cancer are associated with a significant treatment-associated morbidity and mortality. Gastrointestinal complications were responsible for the majority of complications. The treatment-associated mortality at 3 months was two- or three-fold higher than the 30-day mortality; emphasizing its importance as an indicator of the true risks of cystectomy. The clinical T stage, the sex and the ASA grade of the patient were the only independent predictors of survival. The data in this series suggests that radical radiotherapy and radical cystectomy should be both considered as valid primary treatment options for the management of invasive bladder cancer.

### **Editorial Comment**

This is a paper comparing the morbidity of radical cystectomy and radical radiotherapy from a local area in the United Kingdom. Although this is not randomized and scientifically of minor value than a prospective randomized study it still adds to the knowledge on the outcome of recent therapy of invasive bladder tumours. 398 patients with invasive bladder carcinoma were treated between 1993 and 1996 in the Yorkshire region. 302 patient received radical radiotherapy, 96 underwent radical cystectomy. Although there were differences in the two treatment-groups (radiotherapy patients were older than cystectomy patients, 71 years vs. 66 years), there was no major difference in the outcomes. Interestingly 18.8% of the patients who initially received

radiotherapy subsequently where subjected to salvage-cystectomy. The survival rate after 5 years was roughly 40%, the median survival rate was roughly 50% in both groups. In conclusion, this contribution is worth reading and shows the treatment results in a country where radiotherapy and not cystectomy is the primary choice of treatment in invasive bladder tumours. Certainly, from the continental point of view, radical cystectomy still can be considered the treatment of choice, but alternatives, such as radiotherapy, have to be kept in mind.

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