

Competing risks of cystectomy – from calculator to decision

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Invasive bladder cancer bears the highest risk of death in the short term of all common cancers treated by urologists. Surgery is the only option available to achieve complete cure, but it must be on-time, radical and performed by the most experienced surgeons, as complication rates are among the highest of all urological procedures, reaching 50% in high volume centres [1]. Despite lowering perioperative mortality to less than 10%, competing mortality has a tremendous effect on overall survival (OS) accounting for 30% to 50% of all deaths post cystectomy [2]. As the authors of the paper published in *Central European Journal of Urology* 2016/69/4 show, we are still learning how to make this procedure less morbid and less lethal [3]. Selection, centralization and enhanced recovery seem to be key words in this process.

Well-known scales and calculators such as ASA or the Charlson Comorbidity Index (CCI) may assess risk related to major surgery. However, behind them there are single conditions that may increase the risk of complications. Recent research has showed that not all are significant. Out of 17 conditions taken into account by CCI only six affect survival within 90 days after cystectomy: congestive heart failure, chronic pulmonary disease, renal disease, diabetes, cerebrovascular disease and rheumatologic disease [4]. Any single condition has limited power to predict death with area under the curve of 51–55%. In another study presented at the recent European Association of Urology Congress, angina pectoris, chronic lung disease, diabetes mellitus and current smoking were found as conditions affecting OS in long term [5]. According to the authors, presence

of all these conditions together with ASA score 3–4 in male patients increases the risk of competing mortality to 50%. Does this mean that we should forego cystectomy in patients with this constellation of conditions? Or with any others? This is a difficult question, as no randomized trials comparing cystectomy and conservative treatment in patients with specific comorbidities exist. Unfortunately these indexes are still not specific enough to guide such decision making because they do not take into account severity of the diseases. We must still use our experience to judge who is not fit for major surgery. What choice do we have for less than optimal or borderline patients? Cystectomy is still a valid option for some of them. Multimodal therapy and partial cystectomy may also be alternatives in such circumstances. The type of urine diversion can affect morbidity and competing mortality as well. In the current review [3], authors compared ileal conduit and orthotopic bladder. However, ureterocutaneostomy is the least invasive method of urine diversion. It shortens operative time and makes it possible to perform cystectomy almost entirely extraperitoneally which significantly reduces perioperative risks. It is a valid option for old and fragile patients [6]. With ambiguous effects of laparoscopy on decreasing complication rate [7], novel techniques of urine diversion (e.g. combining ureterocutaneostomy with tissue engineering) may emerge in the near future as innovations which can really improve the morbidity of radical cystectomy. For now, we should remember that suboptimal patients need from urologists not only better surgical skills but also more flexibility in choosing methods of treating invasive bladder cancer.

References

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