Response to pre-operative therapy (Recommended)

Reason/Evidentiary Support

Neoadjuvant chemotherapy is commonly part of the management of patient with high risk bladder cancer prior to cystectomy.[1,2] In the 2013 European Association of Urology (EAU) guidelines neoadjuvant chemotherapy was "recommended for T2-T4a cN0 M0 bladder cancer and should always be cisplatinum-based combination therapy."[1] The recommendation was a "grade A" recommendation.[1]

At cystectomy patients treated with neoadjuvant chemotherapy are often down staged and may be pT0. This has been demonstrated to be associated with improved survival.[3-6] pT0 at cystectomy after TURBT is also associated with significantly improved survival but pT0 is more frequent in patients having neoadjuvant chemotherapy.[5]

Improved survival following neoadjuvant chemotherapy has also been studied for specific histologic types and generally had similar results.[7]

There is minimal data however on morphologic alterations in the tumour itself following neoadjuvant chemotherapy and what the significance of such alterations might be. Fleischmann et al developed a "tumour regression grade" by comparing the tumour in the transurethral resection of bladder tumour (TURBT) with residual tumour in the cystectomy following neoadjuvant chemotherapy.[8] The grade was based on the amount of residual tumour with respect to the size of the TURBT site scar. Three grades were assigned: TRG1 – no identifiable residual tumour complete response), TRG2 – residual tumour occupying <50% of the area of fibrosis and TRG3 – residual tumour overgrowing or occupying ≥50% of the fibrotic area. The TRG correlated significantly with overall survival. The study is limited by small numbers and many other issues but this is one of the first efforts to come up with some measurement of response. Of note is that the TRG2 group did better than the TRG3 group.

References

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