Re: Intravesical Bacillus Calmette-Guérin versus Mitomycin C for Ta and T1 Bladder Cancer

Shelley MD, Court JB, Kynaston H, Wilt TJ, Coles B, Mason M

The Cochrane Collaboration, The Cochrane Library, 2006, Issue 1.

Expert's summary:

The Cochrane Collaboration is the result of an international commitment to identify, retrieve, and summarise the evidence from the literature regarding several interventions in medicine, based primarily on randomised clinical trials (RCTs). It is one among the major sources of evidence-based medicine. After examining the available RCTs in the literature, the authors conclude that bacillus Calmette-Guérin (BCG) is more efficacious than mitomycin C (MMC) in the prevention of recurrences for high-risk patients and no differences were found in progression of disease or survival.

Expert's comments:

Accessibility of trials: A total of six papers and one abstract were retrieved from the literature searching for RCTs (or quasi-randomised), comparing MMC and BCG, for a total of 1527 evaluable patients, published from 1991 to 2001. About 50,000 new cases of bladder cancer with 9500 deaths were reported in the United States in the 1990s [1], and 61,420 new cases with 13,660 deaths are expected in the current year [2]. These figures show that over the last 15 yr the number of trials has been low, and the disproportion between patients with the disease and patients who had access to clinical trials has been dramatic.

Long-term data: In the meta-analysis, Ta, grade 1 patients are included in some trials along with patients with carcinoma in situ. In acknowledging this limitation, the authors performed a sensitivity analysis restricted to high-risk cases, and a 31% reduction of recurrences per time unit was observed in favour of BCG; nevertheless, there were no differences in disease progression and survival. Attention should be drawn, however, to the fact that the follow-up was 5 yr or longer in only two studies.

Heterogeneity of treatments: Several dosages and schedules of administration were used for MMC, ranging from 30 mg once a week for 1 mo and monthly for 6 months (total, 300 mg), to 20–40 mg weekly for 1 mo and monthly for 24 mo (total, 1120 mg), and also for BCG, ranging from 27 to 50 mg to 120 mg, with different strains combined in different schedules, although the issue of maintenance therapy was not addressed by the authors of this meta-analysis. Such wide variation, though, raises some concerns about the actual comparability of these studies.

Treatment alternatives: Overall, local and systemic toxicities were observed in 30% and 12%, respectively, for MMC and 44% and 19%, respectively, for BCG. In addition, some worrisome complications, such as ulcerative cystitis in one patient (requiring cystectomy) and pneumonitis in two patients, were associated with BCG; therefore, it seems wise to explore further alternatives to potentiate the effect of MMC [3–5].

References

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Massimo Maffezzini
Department of Urology, Ospedale Galliera, Genova, Italy

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Re: The Concept of Lymph Node Density in Bladder Cancer: Is it Ready for Clinical Practice? Evaluation of the Relevance of Lymph Node Density in a Contemporary Series of Patients Undergoing Radical Cystectomy

Kassouf W, Leibovici D, Munsell MF, Dinney CP, Grossman HB, Kamat AM

J Urology 2006;176:53–57.

Expert's summary:

Primary tumour stage, lymphovascular invasion, and surgical factors affect survival of patients with bladder cancer after cystectomy, but the most powerful prognostic feature is the presence of lymph node metastasis. Radical cystectomy coupled with an appropriate pelvic lymph node dissection may cure up to a third of patients with positive nodes; however, most survivors have only one or two microscopically involved nodes rather than grossly positive or multiple nodes involved. Thus, both node status and node burden determine outcomes after cystectomy. The authors of the paper from the M. D. Anderson Cancer Center evaluated lymph node density (LND) as a predictor of bladder cancer survival after radical cystectomy.