BLADDER CANCER

Intravesical MCC for bladder cancer

Mycobacterial cell wall–DNA complex (MCC) is an effective treatment modality for bladder cancer, and has a favorable safety profile when compared with intravesical therapy using live bacillus Calmette–Guérin (BCG), reports Alvaro Morales and colleagues.

Intravesical administration of BCG is considered to be the most effective therapy for non-muscle-invasive bladder cancer. Safety concerns, however, exist with this therapy. "BCG, as a live bacterium, has a worrisome safety profile, requires specialized handling and has the potential for serious, even fatal, adverse effects," explains Morales, from Queen's University, Canada. By contrast, MCC, which is prepared from the nonpathogenic *Mycobacterium phlei*, does not self-replicate, and is easy to handle.

The researchers administered MCC to 55 patients (mean age 74 years), 47 of whom had failed BCG therapy for carcinoma *in situ* of the bladder. Patients received either 4 mg ($n = 25$) or 8 mg ($n = 30$) doses of MCC at each instillation over the 24-week treatment period. Complete response (defined as negative biopsies together with negative urine cytology) rates at both 12 and 26 weeks were 27.3% in the 4 mg group and 46.4% in the 8 mg group. The majority of adverse events were mild to moderate in severity; only one patient experienced serious adverse events considered to be related to MCC therapy. Only a marginal decrease in safety was observed with the 8 mg dose compared with the 4 mg dose. Thus, Morales *et al.* conclude that 8 mg intravesical MCC is an effective and safe dose that warrants evaluation in further trials.

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Original article Morales, A. *et al.* Intravesical mycobacterial cell wall-DNA complex in the treatment of carcinoma *in situ* of the bladder after standard intravesical therapy has failed. *J. Urol.* **181**, 1040–1045 (2009).