

Freezing the Prostate

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Prostate cancer is the most common malignancy in adult men. Owing to the vigorous screening and early detection efforts made in the last decade, most cancers are detected when still confined to the gland.

Cryosurgical ablation of the prostate is a revived technique using up-to-date computer surveillance and real-time transrectal ultrasonography. The exact role of cryotherapy in the armamentarium of treatments for clinically localized prostate cancer is still debatable. In the last couple of years it has gained the acceptance of the American Urological Association as a "treatment option" [1]. On the other hand however, a respected panel of experts commissioned by the World Health Organization and the International Union against Cancer recently expressed the opinion that they regard cryotherapy as experimental and lacking long-term data that would prove its equivalency to other accepted treatment modalities [2]. Curiously, in the United States – the country that more than any other has promoted cryotherapy for prostate cancer – a recent nationwide survey of 394 practicing urologists revealed that in fact cryotherapy was used in very few patients [3]. This cautious approach emanates from two reasons: the first is that current cryotherapy is not free of complications, and the second is the lack of evidence of impact on cancer-specific survival.

In their paper in this issue of *IMAJ*, Leibovici and colleagues [4] acknowledge that this treatment has its complications and allude to the possibility that improved cryotherapy techniques – mainly using multiple small caliber freezing probes and better computerized simulations of the procedure – may ameliorate and reduce the many complications. Clearly this is still an evolving technique and, given the considerable interest shown by the industry, we will no doubt witness technical improvements in the near future.

Long-term survival data are difficult to accumulate, since patients with localized prostate cancer may live for 10–15 years even without therapy. In the absence of survival data, prostate-specific antigen – a sensitive serum marker – is used widely as a surrogate endpoint to monitor treatment success and failure. Several authors have shown that about 70% of patients achieve undetectable PSA serum levels, the cutoff point usually being less than 0.4 ng/ml. The results reported here by Leibovici et al. [4] are not much better; in fact, only three of the six men with a minimum of 12 months follow-up had PSA less than 0.4 ng/ml. Nonetheless, it should be remembered that only eight patients were other-treatment "naive," and the numbers are too small to draw any conclusions.

In their study [4], one case was a salvage cryotherapy treatment – salvage meaning therapy with a curative intent following documented clinical or biochemical evidence of disease recurrence after previous treatment of localized prostate cancer, e.g., external beam radiation or brachytherapy. Salvage is a more widespread and acceptable indication for the use of cryotherapy. Several large series have shown this to be a feasible and safe modality with good results [6,7]. No doubt the complication rate is higher than in naïve patients, but compared to other options like radical surgery after failed external beam radiation, the safety profile of salvage treatment is considerably better.

Leibovici and co-workers are to be congratulated for bringing this technique to Israel, and for their honest review of their preliminary data. As they themselves suggest, the results of additional studies using the latest version of cryotherapy technology should be accumulated before we all embrace it as an equivalent primary treatment for locally confined prostate cancer.

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PSA = prostate-specific antigen