Sirs,

Following a study by McMahon et al. which found that 33% of patients were troubled with chronic testicular discomfort following vasectomy [1], a study was undertaken at our hospital to examine ways of reducing the incidence of this problem. This work has been published recently [2] and we would like to draw your readers’ attention to the relevant findings.

Seventy patients undergoing vasectomy under general anaesthesia were included in a randomized, prospective, blinded study which examined the benefits of injecting the local anaesthetic bupivacaine into the lumen of the vas deferens before ligation. Patients were allocated to either a treatment group in which they received 0.5% bupivacaine 1 mL or 0.9% saline 1 mL injected into the right or left vas deferens, or a control group which received no injection. A questionnaire was given to each patient in which they recorded their discomfort on left and right sides 1 and 7 days post-operatively on a 100 mm visual analogue scale (VAS), where 0=no pain and 100=worst possible pain. A second questionnaire was sent out after 1 year enquiring about the duration of any discomfort. The results showed that there were no differences in VAS scores between those treated with saline or the control group, 1 or 7 days after operation, or in the incidence and duration of chronic testicular discomfort. The VAS scores were, however, significantly less and testicular discomfort absent in those treated with bupivacaine.

These findings have important implications for several reasons. Firstly, it has now been shown that the incidence of this common complication can be significantly reduced by the injection of a small volume of local anaesthetic into the vas deferens at the time of surgery. Secondly, this work suggests that the main cause of chronic testicular pain following vasectomy may be related to sensitization developing at the dorsal horn of the spinal cord [3]. This form of pathological pain develops after an injury to an area is associated with the frequent transmission of impulses along small unmyelinated C-fibres. These induce a state of sensitization in the dorsal horn receiving the impulses, after which normally innocuous mechanical stimuli may be perceived as being painful. The duration of these central changes may greatly outlast the duration of the sensitizing impulses,
and it is thought that they may produce long-term pain. The reduction of impulses from the site of surgery after the injection of bupivacaine into the vas deferens may attenuate or prevent the development of central sensitization [4]. Further work is underway at our hospital to investigate this possibility in greater detail.

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References


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