Asian Journal of Andrology (2016) 18, 338

www.asiaandro.com; www.ajandrology.com

Open Access

INVITED COMMENTARY

Male Fertility

Vasectomy reversal and other strategies to mitigate postvasectomy pain syndrome

Ryan P Smith[1], Larry I Lipshultz[2], Jason R Kovac[3]

Asian Journal of Andrology (2016) **18**, 338; doi: 10.4103/1008-682X.179243; published online: 8 April 2016

The 2012 American Urological Association (AUA) vasectomy guidelines advise that of those men who undergo vasectomy, 1%–2% will develop chronic scrotal pain that negatively impacts their quality of life.[1] These low numbers are contrasted with a study by McMahon *et al.*[2] that characterized the incidence of chronic testicular pain postvasectomy as being about 33%. Of these cases, 15% were described as troublesome while 5% sought medical attention and 1.7% underwent attempts at further corrective surgical therapy. Given the large number of vasectomies performed in North America every year, the number of patients potentially affected by postvasectomy pain could be staggering.

Nonsurgical methods such as observation, medical therapy and spermatic cord blocks often carry high rates of dissatisfaction. Denervation of the spermatic cord has slowly become more accepted as an effective therapy for men in whom spermatic cord blocks offer temporary relief.[3] Furthermore, research has offered insights into the fact that vasectomy reversal could provide durable relief for this condition.[4] Interestingly, vasectomy reversal has been shown to exhibit equivalent satisfaction rates and pain reduction scores when compared to the removal of the epididymis.[5]

As discussed by Tan and Levine,[6] appropriate counseling at the time of vasectomy is of paramount importance. Testicular and scrotal pain postvasectomy is a real, debilitating, and chronic condition. This aspect is reinforced by the recent AUA guidelines underscoring the need for proper patient education preoperatively. Similarly, clinicians performing vasectomies need to remain vigilant for any patient who presents postvasectomy with increasing pain. Ultimate referral to a sub-specialist who offers spermatic cord denervation and vasectomy reversal may be advised.

Variations in vasectomy techniques have failed to define a means of preventing postvasectomy pain syndrome. In addition, studies examining the pathophysiology of this condition have failed to elucidate a reproducible cause. Prevailing assumptions are focused upon epididymal congestion and obstruction.[7]

Potentially, up-and-coming techniques such as vasal occlusive gels, currently under development, offer novel alternatives to traditional vasectomy. Such an intra-vasal approach could involve the percutaneous puncture of the vasal lumen and instillation of a reversible, semi-permeable polymer gel. This intra-vasal option could theoretically decrease the negative side effects that result from direct scrotal manipulation. However, if the assumption of epididymal congestion holds true, it would stand to reason that any mechanism that retards the flow of sperm from the epididymis has the potential to result in postvasectomy pain. Thus, potentially the best correction for postvasectomy pain rests with the generation of a hypothetical male oral conceptive. Such a medication, by avoiding the need to have an occlusive process for vasectomy, could eliminate postvasectomy pain and its related sequelae.

REFERENCES

1 Sharlip ID, Belker AM, Honig S, Labrecque M, Marmar JL, *et al*. Vasectomy: AUA guideline. *J Urol* 2012; 188: 2482–91.
2 McMahon AJ, Buckley J, Taylor A, Lloyd SN, Deane RF, *et al*. Chronic testicular pain following vasectomy. *Br J Urol* 1992; 69: 188–91.
3 Levine LA. Microsurgical denervation of the spermatic cord. *J Sex Med* 2008; 5: 526–9.
4 Horovitz D, Tjong V, Domes T, Lo K, Grober ED, *et al*. Vasectomy reversal provides long-term pain relief for men with the post-vasectomy pain syndrome. *J Urol* 2012; 187: 613–7.
5 Lee JY, Cho KS, Lee SH, Cho HJ, Cho JM, *et al*. A comparison of epididymectomy with vasectomy reversal for the surgical treatment of postvasectomy pain syndrome. *Int Urol Nephrol* 2014; 46: 531–7.
6 Tan WP, Levine LA. An overview of the management of post-vasectomy pain syndrome. *Asian J Androl* 2016; 18: 332–7. [Doi: 10.4103/1008-682X.175090] [Epub ahead of print].
7 Tandon S, Sabanegh E Jr. Chronic pain after vasectomy: a diagnostic and treatment dilemma. *BJU Int* 2008; 102: 166–9.

[1]University of Virginia, Department of Urology, Charlottesville, VA 22908, USA; [2]Scott Department of Urology, Baylor College of Medicine, Houston, Texas 77030, USA; [3]Men's Health Center, 8240 Naab Road, Suite 220, Indianapolis, Indiana 46260, USA.
Correspondence: Dr. JR Kovac (jkovac@urologyin.com)