



Re: Predictive Factors for Sperm Recovery After Varicocelectomy in Men with Nonobstructive Azoospermia

Shiraishi K, Oka S, Matsuyama H

Yamaguchi University Faculty of Medicine, Department of Urology, Yamaguchi, Japan

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EDITORIAL COMMENT

There is a growing body of data in the literature that patients with nonobstructive azoospermia (NOA) may benefit from varicocele repair in terms of sperm recovery at testicular sperm extraction or presence of sperm in the ejaculate. In this study, sperm recovery was confirmed in 20 out of 83 men with NOA (24%) within 12 months after varicocelectomy, including 10 of 27 patients 37% with maturation arrest (MA) and 9 of 13 (69%) with hypospermatogenesis. Similarly, in a meta-analysis by Weedin et al. (1), men with hypospermatogenesis with favorable testicular histopathology on testis biopsy done at the time of varicocele repair had the best chances of having motile sperm in the ejaculate compared to Sertoli-cell only syndrome or MA. As expected, the more tubules with mature sperm the better the chances will be of sperm recovery after varicocele repair. Furthermore, it should be noted that a significant proportion of men with NOA can be found to have cryptozoospermia on extended sperm preparations rather than azoospermia prior to surgical sperm retrieval (2). Therefore, the length of follow-up before varicocele surgery (the authors reported post-operative sperm analysis with 3-month intervals for 1 year) is also very important data for azoospermia definition.

Taking it a step further, Shiraishi et al. performed genome-wide mRNA expression analysis in patients with MA to determine which genes were differentially up or down regulated in those who responded to varicocelectomy. However, in this study, transcriptome analysis was performed after varicocelectomy and only in patients with MA. Identifying mutations or differential expression in specific genes using blood transcriptome or whole exome sequencing may help us determine who would benefit from varicocele repair.

References

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Emre Bakırcıoğlu, MD