

## Nonobstructive azoospermia: a spectrum, not a single disease



In the article by Majzoub et al. (1), the authors set out to create a predictive model for successful testicular sperm aspiration (TESA) in men with nonobstructive azoospermia (NOA). The authors used retrospective data from 297 men diagnosed with NOA who underwent TESA followed by microdissection testicular sperm extraction (mTESE) if sperm was not identified on TESA. Overall TESA, was successful in finding sperm in 23.6% of men, which is similar to a meta-analysis comparing TESA to mTESE (TESA was successful in 28% of NOA men) (2). Novel to this study, the authors found that men with follicle-stimulating hormone (FSH) <8.5 IU/L and testis volume >7.75 mL had successful TESA 43% of the time. The prediction model performed with acceptable discrimination, area under the curve of 0.74, and an accuracy of 71.8%. This finding is important especially when counseling patients who are unwilling or unable to have mTESE, which has higher sperm recovery but typically is more invasive and more expensive. The authors should be commended for their efforts.

Nonobstructive azoospermia is the most severe form of infertility and requires sperm retrieval and intracytoplasmic sperm injection to have a child. Therefore, predicting sperm recovery is critical in decision-making. Why some men with NOA have successful retrievals while others do not calls

attention to the spectrum of this disease. Increased testis size and lower FSH suggest hypospermatogenesis and areas of mature sperm, which make TESA a successful option, whereas men with small testis and high FSH are more likely to have Sertoli cell only and are best served with mTESE. Unfortunately, despite our best efforts, neither option is better than a coin toss. Certainly more research is needed to improve our ability to predict sperm retrieval.

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