Evaluation of testicular workup for ischemia and suspected torsion score in patients presenting with acute scrotum

Sir,

Manohar et al.\textsuperscript{[1]} retrospectively validated the TWIST score which is a symptom score to assess the risk of testicular torsion in patients with acute scrotum. I really appreciate their work; however, the study has major limitations that could affect the results and hence the final conclusion. When Barbosa et al.\textsuperscript{[2]} first published their initial experience on the TWIST score, it was based on a retrospective validation and concluded that the TWIST scoring system can potentially diagnose or rule out testicular torsion in 80\% of cases, with high positive and negative predictive values for 5 and 2 cutoffs. Ultrasound (US) orders would be decreased to 20\% of acute scrotum cases. Finally, they recommended for a prospective validation of this scoring system.

Frohlich et al.\textsuperscript{[3]} evaluated 258 males in a prospective study and found that the high-risk TWIST score of 7 had 100\% specificity (95\% confidence interval [CI] = 98\%–100\%) with 100\% positive predictive value (95\% CI = 40\%–100\%) for testicular torsion. The area under the curve was 0.82.

Similarly, Sheth et al.,\textsuperscript{[4]} in a prospective study with 128 patients, found the TWIST score cutoff values of 0 and 6 derived from receiver operating characteristic (ROC) analysis identified 31 high, 57 intermediate, and 40 low-risk cases (positive predictive value 93.5\% and negative predictive value 100\%).

Manohar et al.’s study lacks the ideal prospective study design to evaluate the TWIST score, which is based on symptoms and physical signs. The TWIST parameters, testicular size, consistency, and position, cremasteric reflex, and nausea and vomiting, are qualitative variables, and accuracy is difficult unless prospectively collected. Moreover, the standard statistical methods as ROC curve, to calculate sensitivity and specifically, were not used. Furthermore, they mentioned a significantly longer time for presentation (50.6 h), which is far from what was published (18 h).\textsuperscript{[3]} Such a delay certainly changes the symptoms and the physical signs at the time of clinical examination, also adding to the limitations of the study. Manohar et al. used a mean without standard deviation, which is used for normally distributed data; however, the range refers to nonnormally distributed data (6–28 h and 6 h–15 days). In addition, the TWIST score is a discrete scale variable, so it is statistically incorrect to express its mean in decimal form (4.7). Although Doppler US is useful to evaluate acute scrotum, with a positive and negative predictive value of 100\% in the diagnosis of testicular torsion, the European guidelines still recommend scrotal exploration without delay as a standard treatment for a suspected testicular torsion. The time between the onset of symptoms and detorsion is the major determinant of early salvage rate of the testis.\textsuperscript{[5]} Despite these limitations, Manohar et al.’s study can be considered as a significant work that touches on a common clinical scenario that sometimes challenges urologists in the emergency setting. Such a score can be used as adjunct to clinical assessment of the scrotum and can significantly decrease the necessity for Doppler US and unnecessary scrotal exploration. This finally improves patient’s outcome.

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Conflicts of interest
There are no conflicts of interest.

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REFERENCES

1. Manohar GS, Gupta A, Keshavamurthy R, Shivalingaiah M, Sharanbasappa BR, Singh VK, et al. Evaluation of testicular workup for ischemia and suspected torsion score in patients presenting with acute scrotum. Urol Ann 2018;10:20-3.
2. Barbosa JA, Tiseo BC, Barayan GA, Rosman BM, Torricelli FC, Passerotti CC, et al. Development and initial validation of a scoring system to diagnose testicular torsion in children. J Urol 2013;189:1859-64.

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3. Frohlich LC, Paydar-Darian N, Cilento BG Jr., Lee LK. Prospective validation of clinical score for males presenting with an acute scrotum. Acad Emerg Med 2017;24:1474-82.

4. Sheth KR, Kceys M, Grimsby GM, Granberg CF, Menon VS, DaJusta DG, et al. Diagnosing testicular torsion before urological consultation and imaging: Validation of the TWIST score. J Urol 2016;195:1870-6.

5. Molokwu CN, Somani BK, Goodman CM. Outcomes of scrotal exploration for acute scrotal pain suspicious of testicular torsion: A consecutive case series of 173 patients. BJU Int 2011;107:990-3.