

Research Article

Validation of TWIST (Testicular Workup for Ischemia and Suspected Torsion) Score System for Differential Diagnosis in Acute Scrotum in Tertiary Teaching Hospital

Validitas Sistem Skor TWIST (*Testicular Workup for Ischemia and Suspected Torsion*) Dalam Mendiagnosis Banding Pasien Akut Skrotum di Rumah Sakit Rujukan Tersier

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ABSTRACT

The acute scrotum is a common urological emergency and has a broad differential diagnosis. There is no clear consensus on a particular algorithm to follow in the diagnosis of testicular torsion. TWIST Score, a risk scoring system based on signs and symptoms, can be invaluable in managing patients with the acute scrotum, specifically testicular torsion. This study aimed to evaluate the effectiveness of the TWIST scoring system for differential diagnosis of acute scrotal patients. The study was conducted using secondary data, medical records from 111 male patients diagnosed with acute scrotum in Saiful Anwar General Hospital Malang between January 2015 and December 2018. Data about the onset of pain, first contact, history, physical examination findings, any adjunct test performed, and intra-operative findings were collected. The effectiveness of the TWIST score in diagnosing testicular torsion was determined by calculating the sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV). Of the 111 patients, 43 patients (38.7%) had testicular torsion. The mean age was 17.49 (6.69) years. A total of 39 patients were classified as high risk as per the TWIST Score with cut point 5 had 83.7% sensitivity, 95.6% specificity, 92.3% positive predictive value (PPV), and 90.3% negative predictive value (NPV). The area under the curve was 0.93. The use of the TWIST Score in clinical practice can accurately determine high-risk patients who can proceed straight to the operating theatre without the need for an ultrasound.

Keywords: *Acute scrotum, diagnostic, testicular torsion, TWIST score*

ABSTRAK

Akut skrotum merupakan suatu keadaan darurat urologis dan memiliki diagnosis banding yang luas. Tidak ada konsensus yang jelas tentang algoritma tertentu yang harus diikuti dalam diagnosis akut skrotum terutama torsio testis. Penggunaan skor TWIST, yang merupakan sistem penilaian risiko berdasarkan tanda dan gejala, dapat sangat berguna dalam manajemen waktu pada pasien akut skrotum terutama torsio testis. Studi ini dilakukan untuk mengevaluasi akurasi skor TWIST dalam mendiagnosis akut skrotum. Penelitian dilakukan menggunakan data sekunder rekam medis dari 111 pasien pria yang menderita akut skrotum di rumah sakit umum Saiful Anwar Malang dari Januari 2015 hingga Oktober 2018. Data yang dikumpulkan berupa waktu timbulnya nyeri, kontak pertama, riwayat, dan temuan pemeriksaan fisik, tes tambahan yang dilakukan dan temuan intra-operatif. Keefektifan skor TWIST dalam mendiagnosis torsio testis ditentukan dengan menghitung sensitivitas, spesifisitas, nilai prediktif positif (PPV) dan nilai prediktif negatif (NPV). Dari 111 pasien, 43 pasien (38.7%) memiliki torsio testis. Usia rata-rata adalah 17.49 (6.69) tahun. Sebanyak 39 pasien diklasifikasikan sebagai risiko tinggi dengan nilai cut point 5 memiliki sensitivitas 83.7% spesifisitas 95.6%, nilai prediktif positif (PPV) 92.3% dan nilai prediktif negatif (NPV) 90.3%. Kurva ROC didapatkan nilai 0.93. Tingkat penyelamatan testis sangatlah rendah yaitu 18%. Penggunaan Skor TWIST dalam praktik dapat menentukan pasien berisiko tinggi yang dapat langsung menuju ruang operasi tanpa perlu dilakukan USG.

Kata Kunci: Akurasi diagnosis, akut skrotum, torsio testis, skor TWIST

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