<u>**Research Article**</u>

Efficacy of TWIST (Testicular Workup for Ischemia and Suspected Torsion) Score System for Differential Diagnosis in Acute Scrotum

Efektifitas Sistem Skor TWIST (Testicular Workup for Ischemia and Suspected Torsion) Dalam Mendiagnosis Banding Pasien Akut Skrotum

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ABSTRACT

The acute scrotum is a common urological emergency. The differential diagnosis of the acute scrotum is broad. There is no clear consensus on a particular algorithm to be followed in the diagnosis of testicular torsion. A clinical tool such as the TWIST Score, which is a risk scoring system based on signs and symptoms, can be invaluable in management of patients with acute scrotum, specifically testicular torsion, as it can guide clinicians on decisions towards timely management of the patient with an acute scrotum. The aim of this study is to compare the effectiveness of the TWIST scoring system for differential diagnosis of acute scrotal population. Medical record from 111 patients who diagnosed by acute scrotum in Saiful Anwar General Hospital Malang from January 2015 until Desember 2018 were retrospectively reviewed. Data about onset of pain, first point of contact, history and physical examination findings, any adjunct test done, intra-operative findings were collected. The efficacy of the TWIST score in diagnosing testicular torsion was determined by calculating its sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV). From 111 patients, 43 patients (38.7%) had testicular torsion. The mean age was 17.49 (6.69) years. 39 patients were classified as high risk as per the TWIST Score with cut point 5 had sensitivitiy 83.7% specifity 95.6%, positive predictive value (PPV) 92.3% and negative. From 111 patients, 43 patients (38.7%) had testicular torsion. The mean age was 17.49 (6.69) years. 39 patients were classified as high risk as per the TWIST Score with cut point 5 had sensitivitiy 83.7% specifity 95.6%, positive predictive value (PPV) 92.3% and negative.

Keywords: Acute scrotum, diagnostic, testicular torsion

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. Pengunaan skor TWIST, yang merupakan sistem penilaian risiko berdasarkan tanda dan gejala, dapat sangat berguna dalam manajemen waktu pada pasien akut skrotum terutama torsio testis. Rekam medis dari 111 pasien pria yang menderita akut skrotum di yang datang di Rumah Sakit Umum Saiful Anwar Malang dari Januari 2015 hingga Oktober 2018 secara retrospektif ditinjau. Data 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 torsi testis. Usia rata-rata adalah 17.49 (6.69) tahun. 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 0.97. 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, sementara pasien berisiko rendah dapat diobati tanpa menggunakan ultrasonografi.

Kata Kunci: *Akut skrotum, torsio testis, diagnostik*

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