

**PERBANDINGAN SENSITIVITAS DAN SPESIFITAS ANTARA
SISTEM PENILAIAN NISSA DENGAN MESS PADA
FRAKTUR KRURIS KLASIFIKASI GUSTILO-ANDERSON III**

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ABSTRAK

Sistem skoring dipakai untuk membantu dokter spesialis bedah dalam menentukan amputasi pada pasien dengan fraktur terbuka kruris klasifikasi Gustilo-Anderson Tipe III. Tujuan penelitian untuk membandingkan sensitivitas dan spesifitas pada sistem penilaian *Mangled Extremity Severity Score*(MESS) dan *Nerve Injury, Ischemia, Soft-tissue Injury, Skeletal Injury, Shock, And Age Of Patient Score*(NISSSA), sehingga dapat menentukan sistem skoring mana yang lebih baik yang dapat digunakan.

Penelitian dilakukan secara kohort retrospektif dari 200 rekam medik pasien fraktur terbuka kruris klasifikasi Gustilo-Anderson tipe III periode 1 Januari 2008 – 31 Desember 2013 yang memenuhi kriteria inklusi dan eksklusi. Subyek dinilai dengan sistem penilaian MESS dan NISSSA, kemudian dinilai tindakan yang telah dilakukan. Dianalisis berdasarkan nilai MESS dan NISSSA dengan tindakan amputasi menggunakan uji *Chi-Square*. Nilai sensitivitas dan spesifitas dihitung pada kedua sistem tersebut.

Didapatkan 8 pasien memiliki nilai MESS ≥ 7 , yang diamputasi berjumlah 6 orang dan yang tidak 2 orang. Sedangkan untuk skor MESS < 7 yang diamputasi 4 orang dan yang tidak 188 orang. Pada analisis korelasi Chi-Square, hubungan skor MESS dan tindakan amputasi, diperoleh hasil resiko relatif (RR) = 36, probabilitas = 12,610 - 102,773 ($p < 0,05$ dan IK95%). Adapun untuk NISSSA ≥ 9 yang diamputasi berjumlah 9 orang dan 3 orang yang tidak. Pasien dengan NISSSA < 9 yang diamputasi 1 orang dan 187 orang yang tidak. Hubungan skor NISSSA dan tindakan amputasi, diperoleh hasil bahwa resiko relatif (RR) 141,000, probabilitas = 19,432 - 1023,119 ($p < 0,000$ dan IK 95%). MESS memiliki sensitivitas 60% dan spesifitas 98,4% sedangkan NISSSA memiliki Sensitivitas 90% dan spesifitas 98,8%.

Sensitivitas skor NISSSA lebih tinggi dari skor MESS. Spesifitas skor MESS lebih tinggi skor NISSSA. Sistem skoring NISSSA dapat digunakan sebagai pengganti MESS.

Kata Kunci : MESS, NISSSA, Amputasi

ABSTRACT

A scoring system is required to assist surgeons in determining amputation in patients with Type III Gustilo-Anderson classification of open fracture of the lower leg. The purpose of this study is to compare the sensitivity and specificity of Mangled Extremity Severity Score(MESS) and Nerve Injury, Ischemia, Soft-tissue Injury, Skeletal Injury, Shock, And Age Of Patient Score(NISSSA) scoring systems. Consequently, we can determine which is the better scoring system that we can use.

A retrospective cohort study was conducted from medical records of 200 patients whose Type III Gustilo-Anderson classification of open fracture of the lower leg from 1st January 2008 – 31th December 2013 that met the inclusion criteria. Subjects assessed were analyzed with MESS and NISSSA scoring systems to decide whether the amputation should be performed. Then, an analysis of the value of MESS and NISSSA in correlation with amputation was performed by using the Chi-square test. And the calculation of the sensitivity and specificity of both systems.

Out of 8 patients whose MESS ≥ 7 , 6 patients were amputated, 2 people were not. As for those whose MESS < 7 , 4 patients were amputated and 188 people were not. By using Chi-Square test, the correlation of MESS score with amputation, relative risk (RR) = 36, probability = 12.610 to 102.773 ($p < 0.05$, CI 95%). As for NISSSA ≥ 9 , 9 patients were amputated, 3 patients were not. And those with NISSSA < 9 , 1 patient was amputated, 187 patients were not. The correlation of NISSSA with amputation, the results showed that the relative risk (RR) = 141, probability = 19.432 to 1023.119 ($p < 0.05$, CI = 95%). MESS has sensitivity 60% and specificity 98.4%, while NISSSA has sensitivity 90% and specificity 98.8%.

NISSSA had higher sensitivity than MESS. But MESS had higher specificity than NISSSA. NISSSA can be replace MESS as a scoring system.

Keywords: MESS, NISSSA, Amputation