PROGNOSTIC VALUE OF THE RISSC SCORE IN THE IDENTIFICATION OF SEPTIC PATIENTS AT RISK OF COMPLICATIONS

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Background

The identification of septic patients at risk of progression to severe septic syndrome (SSG) is essential. This early recognition is a real challenge for emergency physicians, hence the need to validate prognostic scores. The RISSC score was used to predict the poor prognosis of sepsis but not yet validated in emergency departments (ED).

Objective:

To study the prognostic value of the RISSC score in the identification of septic patients at risk of complication in ED.

Patients & Methods :

Prospective study over 12 months. Inclusion of patients (age> 18 years) admitted in ED for sepsis and in whom the RISSC score was calculated. Collection of epidemiological, clinical, therapeutic and outcome characteristics. The RISSC score was calculated. The unfavorable evolution was defined by the occurrence of SSG (severe sepsis or septic shock). The occurrence of organ dysfunction defines severe sepsis. The persistence of hypotension (PAS <90 mmHg) or signs of hypoperfusion (lactatemia ≥ 4 mmol / l, oliguria) despite vascular filling define septic shock. The ROC curve was used to determine the cut-off of the RISSC score to predict the occurrence of the SSG.

Results & discussion :

Inclusion of 247 patients. SSG: n = 23, 28%.
Average age = 60 ± 19 years. Sex ratio = 0.76.
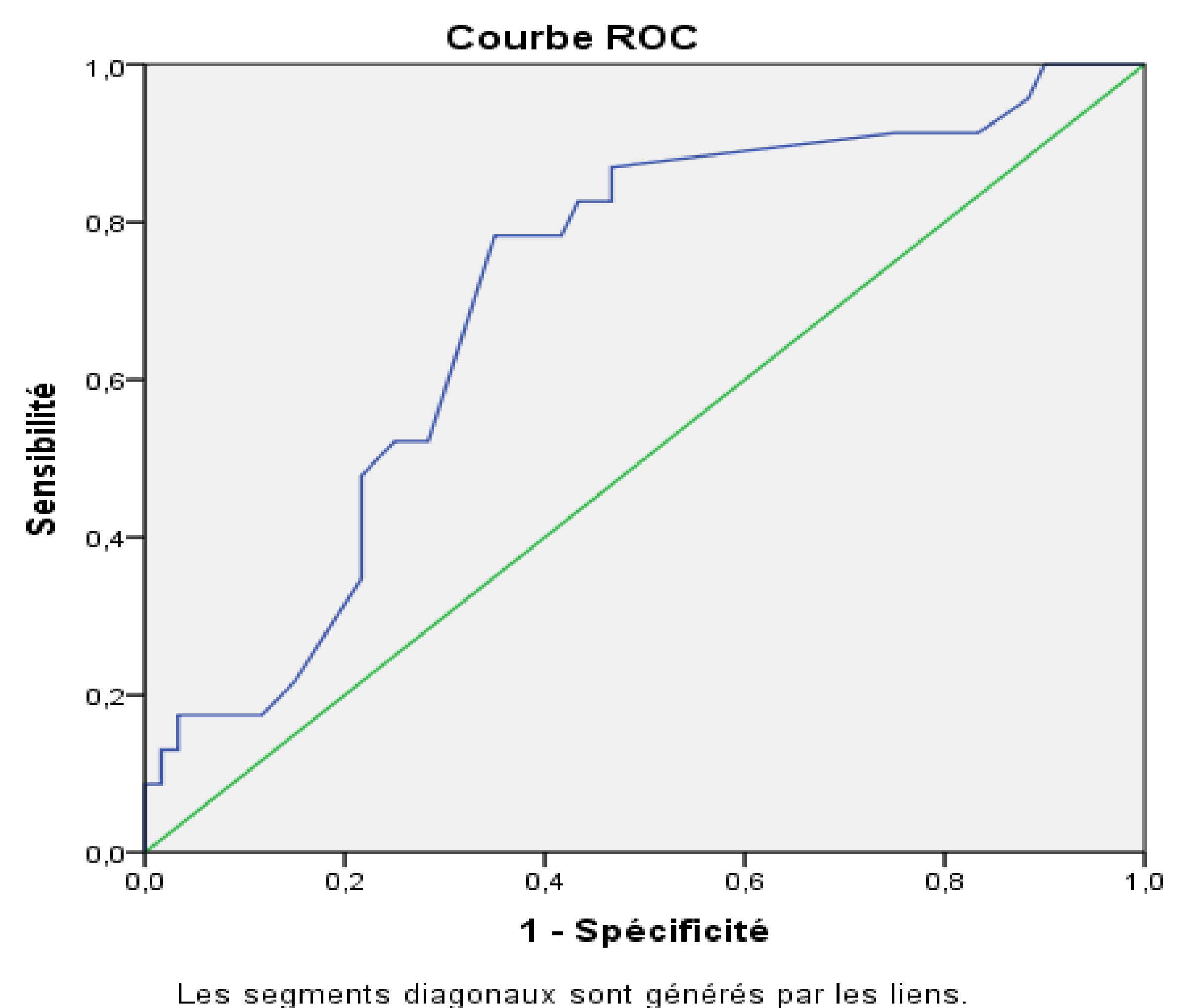The RISSC score was calculated in 83 patients.
Average RISSC score = 8.4 ± 5.4.

Figure 1.ROC CURVE OF RISSC SCORE

The RISSC score was predictive of complication from a cutt-off of **10** with an area under the curve (AUC) at 0.7, 95% CI [0.585 -0.827], p = 0.04 (Figure 1).

Sensitivity, specificity, PPV and NPV were 52, 73, 42 and 80% respectively. The positive likelihood ratio was 1.92.

The RISSC score is associated with an unfavorable evolution in septic patients.

A cohort in Europe including 1531 septic patients, studied the relationship between the RISSC score and the evolution towards an SSG showing that :
a "low" score (score 0-8) and a "moderate" score (score 8.5-16) are associated respectively with an aggravation rate of 9 and 17%,
a "high" score (score 16.5-24) and a "very high" score (score> 24), evolve to a SSG in 31 and 55% of patients respectively (1)

Conclusion & perspectives :

The RISSC score allows early identification of septic patients at risk of complication by the emergency physician from a value more than 10.

1. Alberti C, Brun-Buisson C, Chevret S, Antonelli M, Goodman SV, Martin C, et al. Systemic Inflammatory Response and Progression to Severe Sepsis in Critically Ill Infected Patients. Am J Respir Crit Care Med. 1 mars 2005;171(5):461-8.