

INTISARI

Latar belakang: Stroke merupakan penyebab utama kecacatan dan penyebab kematian kedua di dunia. Pasien stroke berat sering membutuhkan intubasi endotrakeal untuk proteksi jalan napas dan dukungan ventilasi. Trakeostomi dapat menjadi pilihan untuk ventilasi mekanis jangka panjang, namun hingga kini belum terdapat standar prediksi yang jelas terkait kebutuhan trakeostomi pada pasien stroke. Skor Stroke-related Early Tracheostomy (SET) telah digunakan sebagai prediktor kebutuhan trakeostomi, tetapi validasinya di Indonesia, khususnya di RSUP Dr. Sardjito Yogyakarta, belum tersedia.

Tujuan: Menilai validitas skor SET sebagai prediktor kebutuhan trakeostomi pada pasien stroke yang dirawat di Intensive Care Unit (ICU) RSUP Dr. Sardjito Yogyakarta.

Metode: Penelitian ini merupakan studi kohort retrospektif observasional menggunakan data sekunder pasien stroke yang dirawat di ICU RSUP Dr. Sardjito Yogyakarta periode 2022–2024. Sebanyak 168 pasien dipilih dengan teknik consecutive sampling. Variabel bebas adalah skor SET, sedangkan variabel terikat adalah kebutuhan tindakan trakeostomi. Validitas skor SET dievaluasi berdasarkan kemampuan diskriminasi dan kalibrasi. Kalibrasi dinilai dengan uji Hosmer–Lemeshow.

Hasil: Dari 168 subjek penelitian, 86 pasien (51,2%) menjalani trakeostomi. Skor SET menunjukkan kemampuan diskriminasi yang sangat baik dengan nilai AUC sebesar 0,924 (95% CI 0,887–0,961). Pada titik potong skor SET 8, diperoleh sensitivitas 100% dan spesifisitas 41,5%. Sedangkan titik potong optimal penelitian ini ada di cut off 11 dengan sensitivitas 80,2% dan spesifisitas 82,9%. Uji Hosmer–Lemeshow menunjukkan kalibrasi yang baik ($p=0,113$).

Simpulan: Skor SET valid sebagai instrumen prediksi kebutuhan trakeostomi pada pasien stroke di ICU RSUP Dr. Sardjito Yogyakarta, dengan diskriminasi dan kalibrasi yang baik. Pada cut-off SET 8, skor ini memiliki sensitivitas 100% dalam mengidentifikasi pasien yang membutuhkan trakeostomi.

Kata Kunci: Stroke, Kebutuhan Trakeostomi, Skor SET, ICU, Ventilasi Mekanik

ABSTRACT

Background: Stroke is a leading cause of disability and the second most common cause of death worldwide. Endotracheal intubation is frequently required in severe stroke patients for airway protection and ventilatory support. Tracheostomy may be an option for prolonged mechanical ventilation; however, there is no clear standard for predicting the need for tracheostomy in stroke patients. The Stroke-related Early Tracheostomy (SET) score has been proposed as a predictor of tracheostomy requirement, yet it has not been validated in Indonesia, particularly at Dr. Sardjito General Hospital, Yogyakarta.

Objective: To validate the SET score as a predictor of tracheostomy requirement among stroke patients admitted to the Intensive Care Unit (ICU) at Dr. Sardjito General Hospital, Yogyakarta.

Methods: This retrospective observational cohort study used secondary data from stroke patients treated in the ICU of Dr. Sardjito General Hospital between 2022 and 2024. A total of 168 patients were included using consecutive sampling. The independent variable was the SET score, and the dependent variable was the need for tracheostomy. The validity of the SET score was assessed in terms of discrimination and calibration. Discrimination was evaluated using Receiver Operating Characteristic (ROC) analysis, including Area Under the Curve (AUC), sensitivity, specificity, and determination of the optimal cut-off. Calibration was assessed using the Hosmer–Lemeshow test.

Results: Of the 168 subjects, 86 patients (51.2%) underwent tracheostomy. The SET score demonstrated excellent discriminatory performance with an AUC of 0.924 (95% CI 0.887–0.961). At a SET cut-off of 8, the sensitivity was 100% and the specificity was 41.5%. The Hosmer–Lemeshow test indicated good calibration ($p = 0.113$).

Conclusion: The SET score is a valid tool for predicting tracheostomy requirement in stroke patients admitted to the ICU at Dr. Sardjito General Hospital, with excellent discrimination and good calibration. At a cut-off of 8, the SET score provides 100% sensitivity for identifying patients who require tracheostomy.

Keywords: Stroke, Tracheostomy Need, SET Score, ICU, Mechanical Ventilation