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Transcultural and linguistic adaptation of the Richmond Agitation-Sedation Scale to Spanish ☆

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ABSTRACT

Introduction: Goal oriented sedation is standard in the management of critically ill patients, but its systematic evaluation is not frequent. The Richmond agitation sedation scale's efficient operative features make it a validated instrument for sedation assessment.

Objectives: To translate and validate the Richmond agitation sedation scale into Spanish.

Method: A cultural and linguistic adaptation study was designed. Translation into Spanish included back-translation and pilot testing. The inter-rater reliability testing was conducted in Clínica Colombia's cardiovascular and general intensive care unit, including 100 patients mechanically ventilated and sedated. Inter-rater reliability was tested using Kappa statistics and Intra-class correlation coefficient. This study was approved by Fundación Universitaria Sanitas Research and Ethics Institute and Clínica Sanitas Research Committee.

Results: 300 assessments using the Spanish version of the Richmond agitation sedation scale were performed by three independent evaluators. The intra-class correlation coefficient was 0.977 (CI 95% 0.968–0.984). The kappa was 0.84 between the first and second evaluators 0.85 between the first and third evaluators and 0.86 between the second and third evaluators.

Conclusion: The product of this study, the Spanish version of the Richmond agitation sedation scale, is conceptually equivalent to the original scale, being reproducible and understandable to physicians whose native language is Spanish.

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Validación transcultural y lingüística de la escala de sedación y agitación Richmond al español

R E S U M E N

Palabras clave:
Sedación profunda
Sedación consciente
Cuidado crítico
Traducción
Estudios de validación

Introducción: La sedación por metas es un estándar en el manejo del paciente crítico pero su evaluación sistemática no es frecuente, la escala de sedación y agitación Richmond es un instrumento con características operativas eficientes para evaluar sedación.

Objetivo: Traducir y validar la escala de sedación y agitación Richmond al idioma español.

Método: Se diseñó un estudio de adaptación transcultural y lingüística y validación de instrumento. La traducción al idioma español incluyó una traducción reversa y una prueba piloto. Las evaluaciones para la validación se realizaron con 100 pacientes bajo sedación, ventilados mecánicamente en dos unidades de cuidados intensivos, una polivalente y otra cardiovascular de la Clínica Universitaria Colombia. La fiabilidad entre los observadores fue probada utilizando el estadístico kappa y el coeficiente de correlación intraclase. El estudio contó con la aprobación del instituto de investigaciones y comité de ética de la Fundación Universitaria Sanitas y comité de investigaciones de Clínica Sanitas.

Resultados: Se realizaron evaluaciones secuenciales e independientes por tres entrevistadores, completando 300 valoraciones con la traducción de la escala en español. El coeficiente de correlación intraclase fue de 0,977 (IC 95% 0,968 - 0,984). La concordancia cualitativa entre los evaluadores también fue alta con un kappa de 0,84 entre el primer y segundo evaluador, 0,85 entre el primer y tercer evaluador y 0,86 entre el segundo y tercero.

Conclusión: La versión en español de la escala de sedación y agitación Richmond producto de este estudio, resulta conceptualmente equivalente a la original, es reproducible y comprensible para médicos de habla hispana.

Introduction

Goal oriented sedation has become standard in the management of critical patients, with notable benefits in clinical outcomes.[1] It allows for an adequate level of patient–ventilator interaction, alleviates patient anxiety about medical care, favors sleep architecture by conserving the sleep–wake cycle, increases tolerance to procedures like tracheal aspiration, and reduces the frequency of unexpected events like self-extubation and the removal of intravascular devices.[2,3] Another benefit described and associated with an appropriate sedation plane in critical patients is the lower quantity of circulating systemic catecholamines with a decrease in oxygen consumption.[4] It has also been credited with lower barotrauma in patients with reduced pulmonary compliance.[5]

Deep sedation, on the other hand, leads to a series of risks that are potentially avoidable for the patient: increase in the incidence of ventilation-associated pneumonia,[6] more days on mechanical ventilation,[7] prolonged hospital stay, difficulty in neurological evaluations, and neuromuscular weakness in the critical patient.[8]

Although sedation is universally used in intensive care services, its systematic evaluation is infrequent.[9] Objective and subjective methods exist for evaluating sedation.[10] Overall, the subjective evaluation of the level of sedation through scales is preferred to more elaborate techniques.[11] Any evaluation instrument in medicine must be validated and submitted to processes of cultural and linguistic adaptation in order to avoid barriers in the application and the variability in the results.[12]

One of the scales with efficient operative characteristics and reproducibility in the systematic evaluation of sedation is the Richmond Agitation Sedation Scale (RASS).[13] The RASS was developed in 2012 by a multidisciplinary group in the University of Richmond, USA. It consists of a 10-point scale that can quickly evaluate a patient and place them in a level of sedation or agitation through three clearly defined steps[14] (Table 1). The RASS is widely used, even in countries like Colombia. It has been validated in other languages such as French,[15] Swedish[16] and Portuguese,[17] but no reports exist of official translations or validations into Spanish.

The creation of a scale is a complex process. The process of adaptation and validation is more quickly achieved since it originates from a tested instrument. The difference in languages or cultures may affect the way in which it is applied or in which one responds to an instrument of measurement. As such, linguistic equivalence is an obligatory step in the validation of an instrument to another language.

The objective of this endeavor was to create a linguistic equivalent of the RASS and validate the version translated into Spanish in order to have a tool for Spanish-speaking physicians that would allow them to monitor the level of sedation in adult critical patients.

Methodology

The protocol was approved by the Research Committee of the Sanitas University Foundation of Colombia. According to Resolution No. 008430 of 1993 of the Colombian Ministry of Health,