



ORIGINAL

Results and functional outcomes of acute ischemic stroke patients who underwent mechanical thrombectomy admitted to intensive care unit[☆]



L. Viña Soria^{a,d,*}, L. Martín Iglesias^{a,d}, L. López Amor^{a,d}, I. Astola Hidalgo^{a,d}, R. Rodríguez García^a, L. Forcelledo Espina^{a,d}, J.A. Gonzalo Guerra^a, S. de Cima Iglesias^a, E. Murias Quintana^b, P. Vega Valdés^b, S. Calleja Puerta^c, D. Escudero Augusto^{a,d}

^a Servicio de Medicina Intensiva, Hospital Universitario Central de Asturias, Oviedo, Spain

^b Servicio de Radiología, Hospital Universitario Central de Asturias, Oviedo, Spain

^c Servicio de Neurología, Hospital Universitario Central de Asturias, Oviedo, Spain

^d Grupo de Investigación de Microbiología traslacional del Instituto de Investigación del Principado de Asturias (ISPA), Spain

Received 9 February 2017; accepted 18 July 2017

KEYWORDS

Thrombectomy;
Endovascular
procedures;
Tissue plasminogen
activator;
Stroke;
Outcome assessment;
Intensive care unit

Abstract

Purpose: To study the results and complications of endovascular treatment (EVT) in acute ischemic stroke patients admitted to intensive care unit (ICU). To analyse the possible factors related to mortality and level of disability at ICU discharge and one year after stroke.

Design: Observational prospective study.

Setting: Mixed ICU. Third level hospital.

Patients: Sixty adult patients. Consecutive sample.

Interventions: None.

Variables of interest: Epidemiological data, time from symptom onset to EVT, angiographic result, length of stay, days on mechanical ventilation, neurological complications, National Institutes of Health Stroke Scale (NIHSS) at ICU admission and discharge, modified Rankin scale score (mRS) at one year.

Results: Mean age 68.90 ± 8.84 years. Median time from symptom onset to EVT: 180 min. Median NIHSS at admission: 17.5; at discharge: 3. Distal flow was achieved in 90% of cases. Median ICU stay: 3 days. Mechanical ventilation: 81.7%. Functional independence (mRS ≤ 2) 50% at one year. Deaths: 22 (36,6%) of which 8 (13.3%) died during UCI stay and the rest during the first year.

[☆] Please cite this article as: Viña Soria L, Martín Iglesias L, López Amor L, Astola Hidalgo I, Rodríguez García R, Forcelledo Espina L, et al. Resultados y evolución funcional de pacientes críticos con ictus isquémico sometidos a trombectomía mecánica. Med Intensiva. 2018;42:274–282.

* Corresponding author.

E-mail address: lucivina@yahoo.es (L. Viña Soria).

Conclusions: The factors relating to a worse functional outcome were symptomatic hemorrhage transformation, lack of recanalization and complications during EVT. The factors relating to mortality were symptomatic hemorrhage and hydrocephalus. Distal flow was achieved in most cases with a low complication rate. Half of the patients presented functional independence one year after the stroke.

© 2017 Elsevier España, S.L.U. and SEMICYUC. All rights reserved.

PALABRAS CLAVE

Trombectomía;
Procedimientos
endovasculares;
Activador tisular del
plasminógeno;
Ictus;
Valoración funcional;
Unidad de cuidados
intensivos

Resultados y evolución funcional de pacientes críticos con ictus isquémico sometidos a trombectomía mecánica

Resumen

Objetivo: Estudiar los resultados y las complicaciones del tratamiento endovascular (TEV) en pacientes con ictus isquémico agudo ingresados en una unidad de cuidados intensivos (UCI). Analizar los factores que podrían influir en la mortalidad y en el grado de discapacidad al alta y un año después del ictus.

Diseño: Estudio prospectivo observacional.

Ámbito: UCI polivalente. Hospital de tercer nivel.

Pacientes: Sesenta pacientes adultos. Muestra consecutiva.

Intervenciones: Ninguna.

Variables de interés: Datos epidemiológicos, tiempo desde la clínica inicial hasta el TEV, resultado angiográfico, tiempo de estancia en UCI, días de ventilación mecánica, complicaciones neurológicas, *National Institutes of Health Stroke Scale* (NIHSS) al ingreso y al alta de UCI, escala de Rankin modificada (mRS) al año de evolución.

Resultados: Edad media $68,90 \pm 8,84$ años. Mediana de tiempo hasta el TEV: 180 min. Mediana NIHSS al ingreso: 17,5; al alta: 3. Flujo distal en el 90% de los casos. Mediana estancia en UCI: 3 días. Ventilación mecánica: 81,7%. Independencia funcional (mRS ≤ 2) 50% al año del ictus. Fallecimientos: 22 (36,6%); 8 (13,3%) en la UCI y el resto durante el primer año.

Conclusiones: Las variables asociadas a un peor estado funcional fueron la transformación hemorrágica sintomática, la ausencia de recanalización y las complicaciones durante el procedimiento. La transformación hemorrágica y la hidrocefalia se asociaron a mayor mortalidad. Se consiguió flujo distal en la mayoría de los casos, con una baja tasa de complicaciones. La mitad de los pacientes alcanza independencia funcional al año del ictus.

© 2017 Elsevier España, S.L.U. y SEMICYUC. Todos los derechos reservados.

Introduction

In developed countries, ischemic stroke is one of the leading causes of disability and the second most common cause of death. The disease has a devastating effect upon patient quality of life, with extremely high healthcare costs, and constitutes a very important public health problem.¹

Over 85% of all cases of stroke are of an ischemic nature – fundamentally of cardioembolic or atherothrombotic origin.² Arterial occlusion results in diminished cerebral blood flow (CBF). When this flow drops to under 10 ml/100 g/min, cell death and infarction occur. Between the infarct zone and the brain tissue with normal CBF (50 ml/100 g/min) lies a hypoperfused zone of variable extent in which two areas can be distinguished: an oligohemic area with a CBF of over 22 ml/100 g/min that rarely evolves toward infarction, and an ischemic penumbra area with a CBF of under 22 ml/100 g/min that progresses toward cerebral infarction if perfusion is not quickly restored. The

main objective of treatment in cases of stroke is to secure urgent recanalization of the obstructed artery, with early reperfusion of the brain tissue.³ This concept is embodied within the term “time is brain”. Subsequent patient management in the stroke unit or intensive care unit (ICU) is essential to obtain better functional outcomes.^{4,5}

Thrombolysis with intravenous recombinant tissue plasminogen activator (IV r-tPA) has been shown to be effective and safe since publication of the National Institute of Neurological Disorders and Stroke (NINDS) trial.⁶ Following the results of the European Cooperative Acute Stroke Study (ECASS-3), the use of IV r-tPA has been extended to cases of ischemic stroke with an evolution of up to 4.5 h.⁷ The limitations of the treatment are a narrow therapeutic window, lesser efficacy in application to large vessel occlusions and thrombi measuring over 8 mm in size,⁸ and contraindication in patients with a high risk of bleeding complications.⁵

In addition to treatment with IV r-tPA, there are endovascular reperfusion techniques that achieve higher

Download English Version:

<https://daneshyari.com/en/article/8695827>

Download Persian Version:

<https://daneshyari.com/article/8695827>

[Daneshyari.com](https://daneshyari.com)