# ARTICLE IN PRESS

Rev Clin Esp. 2016;xxx(xx):xxx-xxx



# Revista Clínica Española

www.elsevier.es/rce



## **ORIGINAL ARTICLE**

# Stroke in young adults: Incidence rate, risk factors, treatment and prognosis<sup>☆</sup>

F.J. González-Gómez\*, P. Pérez-Torre, A. De-Felipe, R. Vera, C. Matute, A. Cruz-Culebras, R. Álvarez-Velasco, J. Masjuan

Unidad de Ictus, Servicio de Neurología, Hospital Universitario Ramón y Cajal, Instituto de Investigación IRYCIS, Universidad de Alcalá de Henares, Madrid, Spain

Received 5 March 2016; accepted 6 May 2016

#### **KEYWORDS**

Stroke; Stroke in young adults; Cerebral infarction; Cerebral haemorrhage; Cardiovascular risk factors; Stress

#### **Abstract**

*Objectives*: To analyse the incidence, risk factors, aetiology, treatment and clinical evolution of young patients with stroke.

Patients and methods: Retrospective registry of patients aged 55 years or younger hospitalised in a stroke unit during 2014. We recorded the incidence rate for all strokes and analysed demographic data, risk factors, degree of stress, stroke type and aetiology, reperfusion treatments and clinical evolution.

Results: The study included 110 patients, the majority of whom were men (60.9%, 1.6:1 ratio). The incidence rate was 13.3% (110 of 830 strokes). Most of the patients had cardiovascular risk factors. Smoking was the most common risk factor (56.4%), followed by arterial hypertension (50%), dyslipidaemia (42.7%), obesity (33%), diabetes (18.2%) and emboligenic heart disease (12.7%). Some 64.3% of the heart disease cases and 51.1% of the dyslipidaemia cases were discovered during hospitalisation. Some 57.2% of the patients experienced psychosocial stress in the stage prior to the stroke. Some 83.6% of the stroke cases were ischaemic, 12.7% were haemorrhagic and 3.6% were venous sinus thrombosis. Of the ischaemic stroke cases, 30.4% were cryptogenic, 23.9% were lacunar, 16.3% were from uncommon causes, 15.2% were atherothrombotic and 14.1% were cardioembolic. Some 78.6% of the cerebral haemorrhage cases were hypertensive. Some 23.3% of the ischaemic stroke cases underwent reperfusion treatments in the acute phase, achieving levels of functional independence at 3 months of 62.5%.

*Conclusions*: The majority of stroke events in patients 55 years of age or younger appear to be related to a high prevalence of classical cardiovascular risk factors and possibly to psychosocial stress.

© 2016 Elsevier España, S.L.U. and Sociedad Española de Medicina Interna (SEMI). All rights reserved.

\* Corresponding author.

E-mail address: javiergonzalezneurologia@gmail.com (F.J. González-Gómez).

2254-8874/© 2016 Elsevier España, S.L.U. and Sociedad Española de Medicina Interna (SEMI). All rights reserved.

<sup>†</sup> Please cite this article as: González-Gómez FJ, Pérez-Torre P, DeFelipe A, Vera R, Matute C, Cruz-Culebras A, et al. Ictus en adultos jóvenes: incidencia, factores de riesgo, tratamiento y pronóstico. Rev Clin Esp. 2016. http://dx.doi.org/10.1016/j.rce.2016.05.008

2 F.J. González-Gómez et al.

#### PALABRAS CLAVE

Ictus; Ictus en adultos jóvenes; Infarto cerebral; Hemorragia cerebral; Factores de riesgo vascular; Estrés

#### Ictus en adultos jóvenes: incidencia, factores de riesgo, tratamiento y pronóstico

#### Resumen

*Objetivos*: Analizar la incidencia, los factores de riesgo, la etiología, el tratamiento y la evolución clínica de pacientes ióvenes con ictus.

Pacientes y métodos: Registro retrospectivo de pacientes  $\leq 55$  años ingresados en una Unidad de Ictus durante el año 2014. Se recogió la incidencia sobre el total de ictus y se analizaron datos demográficos, factores de riesgo, grado de estrés, tipo y etiología del ictus, tratamientos de reperfusión y evolución clínica.

Resultados: Se incluyó a 110 pacientes, la mayoría hombres (60,9%, ratio 1,6:1). La incidencia fue del 13,3% (110 de 830 ictus). La mayoría de los pacientes tenía factores de riesgo vascular. El tabaquismo fue el más frecuente (56,4%), seguido de la hipertensión arterial (50%), dislipidemia (42,7%), obesidad (33%), diabetes (18,2%) y cardiopatías embolígenas (12,7%). El 64,3% de las cardiopatías y el 51,1% de las dislipidemias se descubrieron durante el ingreso. El 57,2% de los pacientes presentaban estrés psicosocial en la etapa previa al ictus. El 83,6% de los ictus fueron isquémicos, el 12,7% hemorrágicos y el 3,6% trombosis de senos venosos. De los ictus isquémicos, el 30,4% fueron criptogénicos, el 23,9% lacunares, el 16,3% por causas infrecuentes, el 15,2% aterotrombóticos y el 14,1% cardioembólicos. El 78,6% de las hemorragias cerebrales fueron hipertensivas. El 23,3% de los ictus isquémicos recibieron tratamientos de reperfusión en fase aguda y se consiguieron niveles de independencia funcional a los 3 meses del 62,5%. Conclusiones: La mayoría de los ictus en pacientes ≤ 55 años parecen relacionarse con una elevada prevalencia de factores de riesgo vascular clásicos y posiblemente de estrés psicosocial. © 2016 Elsevier España, S.L.U. y Sociedad Española de Medicina Interna (SEMI). Todos los derechos reservados.

## **Background**

Stroke is the main cause of disability in adults, the second leading cause of overall mortality in Spain and the leading cause for women. Stroke has a considerable healthcare impact due to its high prevalence and incidence rate and to the disability and dependence it causes. Its repercussion is even greater when it affects young individuals who are actively employed.

Although the disease has been classically associated with elderly patients, it can occur at any age. IBERICTUS, the largest epidemiological study on stroke conducted in Spain, estimated a stroke rate in 2006 among patients 55 years of age or younger of 9.4%,<sup>2</sup> a significant incidence rate.

Stroke in young individuals (especially those younger than 45 years) has been traditionally related to uncommon conditions such as hypercoagulability states, genetic diseases and vascular malformations. In recent years, however, an increase has been observed in the incidence rate of stroke in relation to classical vascular risk factors such as smoking, arterial hypertension, dyslipidemia, obesity, diabetes<sup>3–9</sup> and psychosocial stress, a difficult to quantify condition that encompasses various interrelated elements such as occupational stress, financial problems, family conflicts and psychological disorders.

In this study, we analyzed the stroke incidence rate and characteristics of patients 55 years of age or younger who were admitted to a stroke unit of a tertiary hospital. The study sought to determine whether the onset of stroke in young patients was related to the presence of classical vascular risk factors or to psychosocial stress.

### Patients and methods

Our hospital is a tertiary stroke centre belonging to the Madrid Stroke Network.<sup>10</sup> We conducted a retrospective study based on a prospective registry of patients 55 years of age or younger with the final diagnosis of stroke who were admitted to our stroke unit in 2014. Patients with traumatic, subdural or subarachnoid hemorrhage were excluded from the study. The patients were treated according to the recommendations of the clinical practice guidelines of the Spanish Society of Neurology and of the 2010 Stroke Care Plan II.<sup>11-13</sup> The study was approved by our clinical research ethics committee.

The following variables were collected according to a predefined protocol: demographic data, vascular risk factors (known or discovered during hospitalisation, such as smoking, arterial hypertension, diabetes mellitus, dyslipidemia, obesity, atrial fibrillation and emboligenic heart disease), toxic habits (alcoholism and drug consumption), presence of patent foramen oval, the taking of oral contraceptives, active oncologic disease, bleeding disorders (congenital or acquired), migraine and psychosocial stress. Psychosocial stress was defined as a state of anxiety, tension, difficulty getting to sleep or irritability related to external problems, especially family, financial and occupational. The patients were asked whether they felt stressed during the period prior to the stroke and to complete the Perceived Stress Scale (PSS) to quantify the degree of stress during the previous month. 14,15 Of the various validated versions, including the original with 14 items and the 2 brief versions with 10 and 4 items, we used the latter (PSS-4) due to its greater

# Download English Version:

# https://daneshyari.com/en/article/8767365

Download Persian Version:

https://daneshyari.com/article/8767365

<u>Daneshyari.com</u>