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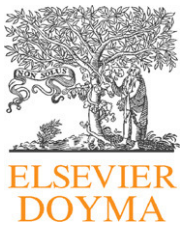

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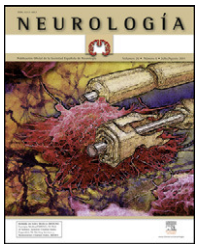

EDITORIAL

From the evidence to the organisation of stroke care☆

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KEYWORDS
Stroke;
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Abstract
Introduction: Acute stroke care in stroke units (SUs) compared to care in general medicine wards provides benefits to the patient.
Development: Acute stroke care in an SU has shown benefits in reducing mortality, institutionalisation, dependency and costs compared to care in internal medicine wards, and even a lower risk of recurrence in the long term. The benefits are associated with specific treatments developed in the SU, such as thrombolytic therapy, development of clinical pathways, standardised procedures, and training and experience of professionals in the SU. This evidence should lead to the proper organisation of hospitals to ensure that all acute stroke patients may benefit from care in an SU. The introduction of SUs is a priority in Europe, although the number of stroke patients admitted to SUs is still low.
Conclusions: Based on current evidence, acute stroke patients should be cared for in an SU due to the associated clinical benefits and hospitals should organise to provide this care to patients.

PALABRAS CLAVE
Ictus;
Unidad de ictus;
Asistencia al ictus

De la evidencia a la organización de la atención al ictus

Resumen
Introducción: La atención al ictus agudo en unidades de ictus (UI) respecto a su atención en salas de medicina general aporta beneficio al paciente.
Desarrollo: La atención al ictus agudo en UI ha demostrado beneficio en reducción de mortalidad, institucionalización, dependencia y costes respecto a la atención en salas de medicina interna, e incluso un menor riesgo de recurrencias a largo plazo. Los beneficios se asocian a los tratamientos específicos desarrollados en las UI como el tratamiento trombolítico, al desarrollo de vías clínicas y procedimientos estandarizados o al entrenamiento y experiencia de los profesionales que integran la UI. Esta evidencia debería conducir a una adecuada organización de los hospitales que pueda garantizar que todos los pacientes con ictus agudo puedan beneficiarse de la asistencia en UI. La implantación de UI es un objetivo prioritario en Europa, aunque el número de pacientes con ictus que ingresan en UI es todavía bajo.

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Conclusiones: Sobre la base de la evidencia actual, los pacientes con ictus agudo deberían ingresar en UI por el beneficio clínico asociado y los hospitales deberían organizarse para poder ofrecer esta atención a los pacientes.

Acute stroke care should be based in stroke units (SUs).[1,2] Successive meta-analyses on clinical trials that have analysed their benefit with regards to mortality, going back home, independence and cost[3] have been clear[4] when comparing care in SUs to care in general internal medicine wards.[5,6] They achieved a 14% reduction in mortality, 18% reduction in institutionalisation and 18% in death or dependency, but with confidence interval margin reductions that can reach 24%, 27% and 27%, respectively.[7] The stroke care model for the SU is not portable[8] and its conclusions are therefore only applicable to hospital organisation. This has meant that implementing SUs has become a priority goal in Europe.[9] Despite this, the percentage of patients admitted to an SU in Europe is still low.[10,11] In Spain, the National Stroke Strategy[12] has also established the SU implementation as a priority goal based on research, programmes and expert opinions that propound its benefits,[13–15] even in elderly patients,[16] which has meant an increase of SUs in Spain.[17]

In this issue of NEUROLOGÍA, we publish the results of PRACTIC, an observational study on SU benefits in Spain in 2004, before the start-up of the National Stroke Strategy[18] (''this issue''). PRACTIC is an observational study that included 88 hospitals in Spain, with a sample that resulted from choosing 10 consecutive patients who had attended the centre, comparing the care results in an SU with those in general wards. Similar analyses have been published in some other countries,[19,20] but PRACTIC is of special importance due to the unique characteristics of the Spanish health system. Our system is characterised by 17 health services, caring for patients with universal support; it therefore links decisions in a decentralisation of geographic areas, but is centralised when referring to planning. This is why it is a good example of how scientific evidence influences strategic and operating decisions.

The first fact that arises from PRACTIC is that more than 75% of patients were attended in an SU. This would probably not be true if we applied it to Spain as a whole; a recent study has shown that the presence of SUs is currently uneven because the 39 SUs are distributed irregularly, mainly concentrated in large urban areas, especially Madrid and Barcelona.[17] That derives from the fact that the centres that took part in the study had an SU, so the comparison relating to prognosis and evolution was more favourable, given that there were no significant differences in the descriptive data.

Some extra data obtained from PRACTIC should be highlighted. Mortality from a stroke is nearly four times higher when a patient is not admitted to an SU. This information implies significant ethical responsibilities, as an administrative organisation's decision to set up an SU or not influences survival in a much greater measure than any known drug. The decision taken to admit or not to admit to an SU by the admissions department becomes an element that influences prognosis and goes far beyond that based on patients' comfort when finding them beds.[21] This occurs in a number of ways: because specific treatments are involved in this action (as all thrombolytic therapy is carried out in an SU), through clinical pathways and standardised procedures[22] or through the training and experience of the professionals that comprise the SU.[23]

As seen in PRACTIC, patients show a significantly lower percentage of complications, have less disability when discharged and a greater percentage go back to their homes in the univariate and multivariate analysis, confirming what was seen in random trials. An interesting fact as a consequence of PRACTIC is that admittance to an SU conditions the risk of new events and long-term recurrences; this is significant not only both in survival curves and in multivariate analysis, with a reduction of practically 50%. Although this is an aspect that should be confirmed in future studies, it is probably indicative of the type of stroke information and health training given in the SU and not on the general wards that can condition the attitude of the patients and their families in the immediate future, especially in prevention of risk factors. However, as the authors suggest, this could be influenced by greater efficiency in clinical diagnosis and hospital aetiology that makes better secondary prevention therapy possible.

Thrombolytic therapy is the drug treatment that has the greatest benefit in acute strokes,[24] although in a slightly less measure that the SU. The dependence on both of them is very high, as it is in the centres having an SU where it is applied in higher percentage rates.[25,26] In PRACTIC, the frequency of thrombolytic therapy is low, and exclusively in the SUs, probably due to the temporary limitation that existed at that time. Due to this, it cannot justify the prognosis benefits of the SUs.

PRACTIC represents an analysis of the SU role in Spain with regards to patients before the approval of the National Stroke Strategy and makes us see the improvement to which a greater implementation of SUs could lead. We should also add the effects that the neurology educational programme for new specialists, with vast specific training on strokes, can entail.[27,28]

Scientific evidence based on observational studies such as PRACTIC and on other previous random and cost studies has shown the benefit of SUs, recommending that their implications should applied to clinical practice and hospital organisation. Nowadays, caring for an acute stroke outside an SU is already a non-scientific medical practice, with negative consequences for the patient in survival rate, sequelae and return to normal life.

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