

of racial disparities in stroke: lessons from the half-full (empty?) glass. *Stroke*. 2011;42:3369–75.

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Reply to emergency stroke care in Spain's "Stroke belt"[☆]

Respuesta a «La atención urgente al ictus en el "Cinturón del ictus" español»

Dear Editor,

I have carefully read the comments on the article "Impact of introducing neurology into a local hospital in Andalusia". When evaluating this article, we must be mindful that it is neither a clinical trial nor a prospective study. It simply describes retrospective data gathering for the purpose of studying a specific situation that is very common in Andalusia: stroke care in hospitals which do not have and have never had neurologists on staff. We felt this provided an excellent opportunity to compare data from the first year a neurologist was working in one such hospital, keeping in mind that the situation probably resembled that before the neurologist was present. The situation may have evolved in later years as specialists in internal medicine expanded their knowledge due to contact with the neurologist. Our intention was to gain an understanding of the true situation of stroke patients in hospitals without neurologists.

While it is true that a retrospective observational study has less validity than a prospective study or clinical trial, there was probably no other way to perform this particular

study. The article clearly explains that the groups differed in their baseline characteristics since assignment was not random. Younger patients with more severe stroke (intracranial haemorrhage) were habitually assigned to the neurology department, whereas older patients and those with TIA were referred to internal medicine. When the neurologist was not present (due to vacations, conferences, etc.), all stroke patients were referred to internal medicine.

The study examined whether age or stroke subtype (ischaemic or haemorrhagic) affected mortality, dependency, or institutionalisation. We concluded that the stroke subtype displayed no effect, and that while age did not affect mortality, it did have an impact on dependency and institutionalisation, which both increased with the patient's age. The beneficial results of providing neurological care were adjusted for patient age and stroke subtype, and they are therefore independent from these factors.

'Spain's stroke belt' does indeed refer to a geographical area (Andalusia and Murcia) with a higher stroke-related mortality rate. In contrast, the REGARDS study analysed risk factors associated with the increase in stroke incidence in specific regions of the United States. Incidence and mortality are distinct concepts that should not be used interchangeably. It is clear that a higher stroke incidence rate must be linked to risk factors and not to the presence or absence of neurological care. Likewise, it is obvious that increased mortality would be associated with poorer patient care.

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[☆] Please cite this article as: Martínez Fernandez EM. Respuesta a «La atención urgente al ictus en el "Cinturón del ictus" español». *Neurología*. 2014;29:186–186.