

## Analysis of in-hospital consultations between the emergency department and the on-call neurologist due to headaches<sup>☆</sup>



### Análisis de las interconsultas al neurólogo de guardia por cefaleas en un servicio de urgencias

Dear Editor:

It was with great interest that we read the study conducted by Rodríguez-Cruz et al.<sup>1</sup> on the workload of on-call emergency department neurologists at Hospital Gregorio Marañón in Madrid. In this study, the authors analysed the number of patients assessed by the on-call neurologist during one year and found that neurological emergencies accounted for a large percentage of the total at 3.5%. Of these neurological emergencies, cerebrovascular accidents were the most frequent.

The percentage of neurological patients attended by the emergency department may be even higher if we count those neurological conditions that are not assessed by the on-call neurologist. This may be especially evident in certain diseases, such as headache. While headache is the most frequent reason for visiting a neurologist, its risk in a patient seeking medical attention in the emergency department is difficult to assess.<sup>2</sup> With this in mind, we conducted a descriptive study of a series of patients who visited the emergency department due to headache. The study was conducted at a tertiary care university hospital with a 24-hour on-call neurology team formed by a neurology specialist and 2 resident neurologists between 1 January and 31 December 2013. We gathered data from the odd months by systematic sampling. We used the patients' electronic medical records at the emergency department to gather demographic, diagnostic, and allocation data (admissions, transfers, etc.).

A total of 287 patients were included in our study; in 81 cases (28.2%), the emergency department called for a neurology consult. Forty-six patients (16%) were admitted whereas the rest were discharged. Thirty-six (44.4%) of the cases motivating a neurology consult were admitted to hospital, vs only 10 (4.8%) of the patients who were not evaluated by neurologists ( $P < .0001$ ).

These data prove that the prevalence of neurological diseases in the emergency department—headache in this example—is even higher considering the cases that are not evaluated by neurologists. The increase in the number of consultations with the on-call neurologist, which has been reported in recent studies,<sup>3,4</sup> confirms the high

prevalence of neurological diseases that may motivate emergency neurology consults. Certain conditions, such as headaches, may result in fewer consultations than acute focal neurological signs, meaning that their frequency may be underestimated if we only count the patients evaluated by the on-call neurologist. A similar phenomenon is seen with other entities, such as epilepsy, in which the rate of consultations with the neurology department reaches 55%.<sup>5</sup> For this reason, future studies should assess all the patients attended in the emergency department to estimate the real prevalence and distribution of emergency care for neurological disease and establish clear criteria for emergency neurological assessment. This will serve to improve healthcare quality and patient safety in hospital emergency departments.<sup>6,7</sup>

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