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ORIGINAL ARTICLE

Retrospective multicentre observational study on clinical management and treatment of different types of status epilepticus in clinical practice☆

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KEYWORDS
Status epilepticus;
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Complex partial;
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Abstract
Introduction: Status epilepticus (SE) is a neurological emergency associated with significant mortality and morbidity. We analyse characteristics of this entity in our population.
Methods: Data from electronic medical records of adults diagnosed with SE were collected retrospectively from 5 hospitals over 4 years.
Results: Data reflected 84 episodes of SE in 77 patients with a mean age of 60.3 years. Of this sample, 52.4% had a previous history of epilepsy. Status classification: 47.6% tonic—clonic, 21.4% complex partial, 17.9% partial motor, 6% partial simple, 3.6% myoclonic, and 3.6% subtle SE. Based on the duration of the episode, SE was defined in this study as early stage (up to 30 min) in 13.1%, established (30-120 min) in 20.2%, refractory (more than 120 min) in 41.7%, and super-refractory (episodes continuing or recurring after more than 24 h of anaesthesia) in 13.1%. Ten patients (11.9%) died when treatment failed to control SE. The cumulative percentage of success achieved was 8.3% with the first treatment, 27.3% for the second, 48.7% for the third, 58.2% for the fourth, 70.1% for the fifth, 80.8% for the sixth, 83.2% for the seventh, and 84.4% for the eighth.

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Conclusions: In our study, we found that SE did not respond to treatment within 2 hours in approximately half the cases and 11.9% of the patients died without achieving seizure control, regardless of the type of status. Half the patients responded by the third treatment but some patients needed as many as 8 treatments to resolve seizures. Using large registers permitting analysis of the different types and stages of SE is warranted.

PALABRAS CLAVE
Estatus epileptico;
Tratamiento;
Pronóstico;
Tónico-clonico;
Parcial complejo;
Parcial motor

Estudio observacional multicéntrico retrospectivo sobre el manejo clínico y terapéutico de los diferentes tipos de estatus epiléptico en la práctica clínica

Resumen
Introducción: El estatus epiléptico es una urgencia neurológica asociada a una mortalidad y morbilidad significativa. Analizamos las características en nuestra población.
Métodos: Se recogieron los datos de manera retrospectiva de la historia clínica electrónica de adultos con diagnóstico de estatus epiléptico en 5 centros hospitalarios durante 4 años.
Resultados: Se obtuvieron datos de un total de 84 episodios en 77 pacientes, con edad media de 60,3 años. El 52,4% tenían historia previa de epilepsia. Clasificación según el tipo de estatus: 47,6% tónico-clónico; 21,4% parcial complejo; 17,9% parcial motor; 6% parcial simple; 3,6% mioclónico y 3,6% sutil. Si analizamos el momento que finalizó el estatus según las fases definidas para este estudio obtenemos: 13,1% precoz (hasta 30 min); 20,2% establecido (entre 30-120 min); 41,7% refractario (más de 120 min) y 13,1% superrefractario (continúan o recurren después de más de 24 h de anestesia). Diez casos (11,9%) fallecieron sin haberse controlado el estatus. El porcentaje acumulativo de éxito alcanzado con el primer tratamiento fue de 8,3%; segundo 27,3%; tercero 48,7%; cuarto 58,2%; quinto 70,1%; sexto 80,8%; séptimo 83,2% y octavo 84,4%.
Conclusiones: En nuestro estudio encontramos que el estatus no se controló en las primeras 2 h en casi la mitad de los casos, y un 11,9% fallecieron sin controlarse, sin haber diferencias significativas entre el tipo de estatus. En casi la mitad se logró el control del estatus con el tercer tratamiento, pero en algún caso se precisó hasta 8. Son necesarios registros amplios que permitan analizar el manejo en los distintos tipos y fases.

Introduction

Status epilepticus (SE) is a neurological condition associated with high morbidity and mortality. Estimated global incidence varies with the population under study and the definition used.[2,4,10,20,23] In Europe, incidence of convulsive SE ranges from 3.6 to 6.6 cases per 100 000 population, whereas that of nonconvulsive SE ranges from 2.6 to 7.8 cases per 100 000 population.[3,12,22] According to a recent study conducted in the United States, annual incidence has increased from 3.5 cases per 100 000 population in 1979 to 12.5 cases per 100 000 population in 2010.[5] Despite recent advances in antiepileptic drug research, few randomised clinical trials have been conducted, mainly because of their methodological and ethical complexities. According to published guidelines, treatment may vary from country to country due to differences in drug availability.[15,16,21] The purpose of this study is to determine the characteristics of and treatment approaches for the different types of SE in our population.

Material and methods

This retrospective study involved reviewing electronic medical histories from patients diagnosed with SE —CIE-9 codes 345.2, 345.3, and 345.7— in 5 secondary hospitals providing care to a population of 860 000 inhabitants in the Region of Madrid (Spain), between their respective opening dates in 2008 and June 2012. We recorded the following demographic and clinical variables: history of epilepsy, characteristics of SE, treatment, progression, and sequelae. For the purposes of this study, we defined the following stages of SE: early (before the 30-min mark), established (30-120 min), refractory (more than 120 min), and super-refractory (SE that continues or recurs 24 h or more after initiation of anaesthetic therapy). As previous studies have done, we evaluated treatment results based on outcome categories. Success was defined as a drug's ability to achieve complete SE control with no relapses after withdrawal, secondary effects leading to drug discontinuation, or death during treatment. Likewise, we defined 5 categories of failure: