

## Letters to the Editor

### Carbamazepine hypersensitivity syndrome

Dear Sir,

Anticonvulsant hypersensitivity syndrome is a serious adverse reaction which includes a variety of different symptoms and is usually characterised by a high temperature, rash and involvement of one or more internal organs. This was initially identified in cases involving aromatic anticonvulsants such as phenytoin, carbamazepine, phenobarbital and primidone. The incidence is of around one case per 1000 to 10,000 patients exposed to the drugs. The risk of carbamazepine hypersensitivity syndrome has been calculated by analysing a database of the population and stands at 1.0 to 4.1 per 10,000 people<sup>1</sup>.

The syndrome involves a distinctive drug-induced skin reaction which is potentially fatal and occurs between one and eight weeks after exposure to the medication<sup>2</sup>. Fever is usually the first symptom. In 70% to 90% of cases, lymph node enlargement and skin reactions are identified within 24 to 48 hours, often in the form of a widespread reddish purple maculopapular rash. The liver is affected in over half of patients and/or they experience haematological abnormalities (atypical lymphocytes or eosinophilia). Other possible symptoms include arthromyalgia, facial swelling and different effects on the kidneys, lungs or central nervous system. The mortality rate is around 10% and the most frequent cause of death is liver failure. Being 12% to 50% higher for patients with acute icteric hepatitis. The following case involves carbamazepine hypersensitivity syndrome.

A 43 year old woman came to the emergency department complaining of a moderate temperature, general discomfort and a generalised, bright reddish purple skin rash that had been present for the last five days. Her medical history showed that 15 days ago she had been diagnosed with suspected trigeminal neuralgia and she had been prescribed a treatment of carbamazepine, at a dosage of 200 mg/8 hours. She had previously been seen at a different hospital and had been diagnosed with a rash. During the examination the following points stood out; her underarm temperature was 38°C, her forehead and the tissues around the eyes were swollen, she had a generalised reddish purple maculopapular rash that affected the palms of her hands and soles of her feet, her mucous membranes were not affected, the lymph nodes in her neck, underarms and groin were painful and swollen but chest and abdominal examinations showed no abnormalities. In the additional tests,

the blood test showed 20% atypical lymphocytes, aspartate aminotransferase at 450 IU/I, alanine aminotransferase at 1,288 IU/I, gamma glutamyl transferase at 367 IU/I and lactic acid dehydrogenase at 694 IU/I. Coagulation, immunoglobulin and thyroid tests were all normal as was the rest of the biochemical exam. She was also negative for hepatitis infection markers. Serologic tests did not support a diagnosis of a recent cytomegalovirus infection or Epstein- Barr virus. Chest x-ray electrocardiogram and the abdominal ultrasound showed no abnormalities. Carbamazepine was withdrawn and the patient started a treatment of intravenous antihistamines and glucocorticoids. Fever disappeared on the second day and the swelling went down gradually. During hospitalisation, the rash gave way to a gradual flaking of the skin and the liver returned to normal. She was discharged after twelve days and was in good medical condition.

The case described meets all the diagnostic criteria of anticonvulsant hypersensitivity syndrome<sup>3</sup>. Given that the clinical symptoms are varied it is important to be alert because if the patient is diagnosed quickly and the drug is withdrawn in time, improvement occurs in a matter of weeks or even days. It should be highlighted that, given the high incidence rate of cross-reactions between the anticonvulsants mentioned, which is around 80%, they are not recommended for patients who have this syndrome<sup>1</sup>. It is also worth noting that first-grade relatives of patients who develop the syndrome are four times more at risk than the general population of having a reaction to these drugs and for this reason the correct type of family assessment should be carried out<sup>4</sup>.

1- Durán M, Danés I. Síndrome de hipersensibilidad por antiepilépticos. *Med Clin (Barc)* 2001;116:155-6.

2- Sulivan JR, Shear NH. The drug hypersensitivity syndrome: what is the pathogenesis? *Arch Dermatol* 2001;137:357-64.

3- Bocquet H, Bagot M, Roujeau JC. Drug induced pseudolinfoma and drug hypersensitivity (Drug Rash with Eosinophilia and Systemic Symptoms). *Sem Cutan Med Surg* 1996;15:250.

4- Moreno M, Dfáz M, Dancziger E, Kaminsky A. Síndrome de hipersensibilidad. *Dermatol Peru* 2004;14:44-51.

**D. Vicente Fuentes, F. Bonilla Rovira,  
J. A. Gutiérrez Navarro, C. Barceló Iglesias**  
*Emergency department,  
University General Hospital of Elche, Alicante.*