

# Deep brain stimulation of the anterior nucleus of the thalamus in a patient with super-refractory convulsive status epilepticus

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# Clinical application of pharmacogenetics for adverse reactions of antiepileptic drugs

## ◆Key Points

- ◆Inter-individual variations in drug ADRs may be due to genetic factors
- ◆The HLA-B\*1502 allele is associated with carbamazepine-induced SJS and TEN; this allele is present in people of Asian ancestry but rare in Caucasians.
- ◆When considering carbamazepine use in patients of Asian ancestry, screening for the HLA-B\*1502 allele should be done before commencing usage.
- ◆Screening has been shown to reduce the incidence of carbamazepine-induced SJS and TEN

# Who should receive clinical pharmacogenetic testing?

- ◆ In antiepileptic drug-naïve epilepsy patients for whom CBZ is being considered and who belong to an ethnic group in which HLA-B\*1502 and HLA-A\*3101 are found, HLA-B\*1502 and HLA-A\*3101 should be screened before antiepileptic drug therapy.
- ◆ In patients who have previously taken CBZ for a duration of  $\leq 3$  months, there is the possibility that ADRs occur even if no symptoms were observed during the previous period of treatment due to their delayed onset, and genetic testing should be considered in such patients.
- ◆ In patients who have previously experienced hypersensitivity reactions potentially related to CBZ, genetic testing is recommended as part of the differential diagnosis and for the direction of future therapy.