

Delayed hypersensitivity to antiepileptic drugs in children

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Abstract

Background: Antiepileptic drugs (AEDs) are widely used for the treatment of epilepsy, but they can be associated with the development of mainly delayed/non-immediate hypersensitivity reactions (HRs). Although these reactions are usually cutaneous, self-limited and spontaneously resolve within days after drug discontinuation, sometime HRs reactions to AEDs can be severe and life threatening. Aim: This paper seeks to show examples on practical management of AEDs HRs in children starting from a review of what it is already known in literature. Results: Risk factors include age, history of previous AEDs reactions, viral infections, concomitant medications and genetic factors. The diagnosis work-up consists of in vivo (Intradermal testing and Patch testing) and in vitro tests [serological investigation to exclude the role of viral infection, lymphocyte transformation test (LTT), cytokine detection in ELISpot assays and granulysin (Gr1) in flow cytometry]. Treatment is based on a prompt drug discontinuation and mainly on the use of glucocorticoids. Conclusion: Dealing with AEDs HRs is challenging. The primary goal in the diagnosis and management of HRs to AEDs should be trying to accurately identify the causal trigger and simultaneously identify a safe and effective alternate anticonvulsant. There is therefore an ongoing need to improve our knowledge of HS reactions due to AED medications and in particular to improve our diagnostic capabilities.

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