

Global Summit on **BRAIN DISORDERS AND THERAPEUTICS**

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Value of therapeutic blood level monitoring when treating patients with Epilepsy**Roy G Beran***Neurology Department, Liverpool Hospital, Australia*

This presentation was invited following a publication which reported interaction between lamotrigine and female sex hormones which reduced the antiseizure medication (ASM) blood levels, placing the patient at risk of break through seizures, without warning of such potential. This was identified following routine ASM blood level measurement. At much the same time, a previously uncontrolled patient with epileptic seizures, who had been seizure free on a stable ASM monotherapy, presented with a further seizure. ASM blood levels were half what they should have been and the patient was accused of non-compliance. She subsequently reported that, when admitted to hospital, she had been given a generic alternative to her usual ASM and, upon return to her usual ASM, her level thereof doubled to its previous result. Neither she nor her treating neurologist had been advised of the generic substitution. It further reports medication toxicity when a pharmaceutical company changed manufacturers of Lamictal® which translated to selling a generic as the parent compound. The presentation highlights the benefits of using ASM blood level monitoring, especially when treating patients with epilepsy, and examines the problems arising from the use of generic alternatives, especially if the patient and his/her doctor were not informed of the change. It explores bioequivalence, brand substitution and how ASM blood level monitoring adds an extended benefit to manage patients with epilepsy who have a narrow therapeutic index. It advocates use of proprietary trade names, to identify prescribed medications, even if using generic alternatives, to obviate substituting one generic compound for another and provides the rationale behind such proposition. It demonstrates how therapeutic ASM blood levels can be used to individualise treatment and to improve patient management. It advocates the need for patient informed consent, should any change in treatment, including generic substitution, be contemplated and the reasoning behind same.

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