LAMOTRIGINE
THERAPEUTIC DRUG MONITORING (TDM) GUIDELINE

Patient Population

Women of child-bearing age ONLY.

Who Can Order Test

Neurologists and obstetricians, or residents/physicians/nurse practitioners/pharmacists consulting with a neurologist or obstetrician.

Level Monitoring Concept

As there is no well-defined “one size fits all” target range, individualized target concentrations will be used.

Level monitoring is an adjunct to treatment. Clinical/toxicological presentation is the overriding determinant for dosing changes (i.e. “treat the patient, not the number”).

Level Monitoring Criteria and Process

1) Patient must have been on current dose regimen for at least TWO weeks.
2) Specimens should be collected pre-dose (≤2 hours before dose). Any exceptions should be clearly noted on the requisition.
3) Complete drug utilization data on routine laboratory requisition (times of last and next doses, length of time on current dose regimen).
4) Complete Lamotrigine Level Order Form and submit with requisition. Level requests submitted without this order form will be rejected.
5) Baseline specimen while not pregnant should be collected if possible.
   a) Level should be redone if subsequent breakthrough seizures or signs of toxicity develop.
6) Subsequent Specimens:
   a) During pregnancy, once every trimester (3 months) or if breakthrough seizures occur. If a serum level is <65% of the non-pregnant baseline level, an increase in dose will be considered. Two weeks after dose adjustment, a specimen for a follow-up level should be drawn.
   b) Specimen may be collected one month post-partum to verify pre-pregnancy baseline. Dosage adjustments may be required.

References


This Guideline has been approved by the Alberta Health Services (AHS) Edmonton Zone Therapeutic Drug Management Working Group and the AHS Edmonton Zone Chemistry Test Optimization Committee in consultation with neurologists and obstetricians.

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