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P157. EVALUATION OF MEASUREMENT UNCERTAINTY FOR CARBAMAZEPINE

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Uncertanty measurement is defined as “a parameter associated with the result of a measurement, that characterises the dispersion of the values that could reasonably be attributed to the measurand”. The objectiveness of this study, calculate measurement uncertainty of carbamazepine by using internal quality control data and inter laboratory results to compare these calculated measurement uncertainties with total allowable error % (TEa %) value of CLIA'88.

In this study was done by the internal quality control datas form October 2015 to March 2016. The estimation of carbamazepine measurement uncertainity was calculated according to ISO21748 guide. Inter laboratory comparison was executed to estimate bias. Valproic acid levels were determined using the immunoturbidimetric method on the Roche Cobas Integra 800 analyzer.

Coefficient variations (CV) calculated from internal quality control analyses were 3,81 and 4,79 at low and high level of internal quality control sera values respectively. Total allowable error value of valproic acid was 15,51% and was not higher than desirable TEa% values of CLIA'88.

Carbamazepine is an anticonvulsant. It works by decreasing nerve impulses that cause seizures and pain. The therapeutic reference range of carbamazepine is 4-12 mg/L. Careful clinical monitoring should be performed during the therapy with carbamazepine. For this purpose, using uncertainty value is a good practice to interpret of patient result.

Laboratories should calculate measurement uncertainity and evaluate results according to spesific criterias.

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