

## **P194. FAST QUANTITATION OF NORTRIPTYLINE BY LIQUID CHROMATOGRAPHY TANDEM MASS SPECTROMETRY (LC-MS/MS)**

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Therapeutic drug monitoring (TDM) of tricyclic antidepressants (TCAs) is considered useful in patients with major depressive disorder, since these drugs display large individual differences in clearance, and the therapeutic windows of these drugs are relatively small. Nortriptyline is a second-generation tricyclic antidepressant and used in the relief of symptoms of depression and in some cases of nocturnal enuresis. The aim of this study was to develop a simple, fast and accurate tandem mass method for determination and quantification of nortriptyline. This method is designed for high sample throughput of only 10µL serum sample.

Mass spectrometric analyses were performed using a Shimadzu LC-20-AD (Kyoto, Japan) coupled with a ABSCIEX API 3200 triple quadrupole mass spectrometer (USA) equipped with an electrospray ion source (ESI) operating in positive mode.

The standard curves for nortriptyline was linear within the range of 1,56-100 µg/L. Total run time was 5 minutes. Chromatographic separation was performed on a C18 column (4.6×50 mm, 5 µm, Phenomenex Luna) with a mobile phase consisting of 1% formic acid in water and MeOH (10:90, V/V) at a flow rate of 0.2 ml/min.

The narrow therapeutic range of these drugs are of importance to be analyzed at critical concentrations. This method has capability to determine these levels.

Data from calibration curves reveal that the method is accurate and precise.

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