
Poster

[P27-6] P27-6: Clinical toxicology (2)

Chair: David William Kinniburgh, Canada

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[P27-6-3] Changing trends in substance abuse: analysis of lab test results from patient cohort at The National Rehabilitation Center, Abu Dhabi, U.A.E.

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Keywords: Changing trends in substance abuse: Analysis of lab test results from patient cohort at The National Rehabilitation Center, Abu Dhabi, U.A.E

Background

Since its launch in 2002, the laboratory at the National Rehabilitation Centre, NRC, Abu Dhabi, UAE, has kept a comprehensive record of the contraband substances test results, of all the patients who sought treatment at the Centre for their alcohol and substance related disorders.

Aim: To share this unique information with the local and international addiction medicine community, with emphasis on types of substances misused by this cohort, prevalence, patterns of substance related disorders and other insights gained from clinical experience.

Methods Reviewing the lab test results from screening, immunoassay, Gas Chromatography–Mass spectrometry GC/MS, liquid chromatography–tandem mass spectrometry (LC-MS/MS) and expert clinical observations at the NRC focusing on the last 3 years 2013, 2014 and 2015.

Methods to be used must be chosen on the basis of proven sensitivity, selectivity, specificity and reliability. However, it is always advised that two different methods be used; an initial screening method followed by a confirmatory method using different chemical or physical principles.

Immunoassay is the method of choice for the initial screening of specimens. Different techniques of immunoassay are available, including radio immunoassay (RIA), Enzyme Multiplied Immunoassay (EMIA), Fluorescence polarization Immunoassay (FPIA), and Latex Agglutination Inhibition (LAI).

The GC/MS (Gas Chromatography Mass Spectrometry) is considered to be the golden standard method for confirmation of the preliminary and presumptive positive results.

In our lab. At the NRC, we analyzed all our patients' specimens on the Architect instrument from Abbott Diagnostics, USA, using the Enzyme Multiplied Immunoassay technique. All the specimens screened by this method were confirmed positive or negative, using the Gas Chromatography Mass Spectrometry –GC/MS, QP2010, ULTRA, for the sake of producing valid and reliable results and for the correlation of the results produced by the Architect instrument, besides obtaining reliable data for this study.

Results

A total of (2688) patients' urine toxicology results were available for analysis. The last 3 years patients records were selected and analyzed. The 3 most commonly abused illicit substances in 2013 were: Tramadol (702), Opiates (446) and Benzodiazepines (271).

In 2014 the top 3 were opioids (485), Tramadol (354) and Cannabis (236).

In 2015 opiates topped the league with (818), second was Pregabalin (Lyrica) (589) and Tramadol stabilized

at (391). A complete list of all the substances found in the samples, type of tests and significance of the findings is provided in the study.

Conclusions

Drug abuse is a constantly changing scene and services need to change their strategy guided by the available information from good surveillance, clinical assessments and multiple other sources.