

SHISHA - THE CLANDESTINE CRYSTAL METH OF GREECE

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Introduction: The financial crisis in Europe has also affected Greece last years. The drug addicts under the current socioeconomic conditions resort to alternative or substitute drugs that are less expensive. A new drug under the street name "shisha" has been appeared in Greece the last three years. It is also referred as the "drug of crisis" or the "cocaine of the poor". Its cost is low, it is normally addressed to drug addicts of low socioeconomic status and its use is widespread in the relative districts of Athens. "Shisha" is produced in clandestine laboratories using a variety of ingredients like acetone, methanol, toluene, red phosphorous, iodine crystals, caustic soda (sodium hydroxide), cold and flu medicines (ephedrine or pseudoephedrine) and car batteries under different "cooking" recipes that are available in Internet. It is mainly produced, distributed and used by immigrants from Asian countries and young drug addicts in Athens centre. "Shisha", according to the drug users is mostly smoked or injected. The appearance of seized street samples was identical with this of crystal meth samples and their analysis revealed that they consist of methamphetamine.

Case report: A young man injured by an explosion in a clandestine laboratory that was set up inside his house. Scene investigation reveals that the man tried to synthesize "shisha" using acetone, iodine and commercially available tablets that are used against cold and flu and contain pseudoephedrine and paracetamol. During the manufacturing process acetone was exploded and the man was burned in the front area of his body (burn percentage 6.5%). The man was hospitalized for two weeks.

Materials and Methods: The analytical method used was the one that our Laboratory uses for the determination of amphetamine type stimulants in biological fluids. The method includes a liquid-liquid extraction by dichloromethane: isopropanol (9:1, v/v) at pH 9, followed by evaporation to dryness of the eluates (after acidification with ethanolic solution of HCl, 1%) and derivatization of the analytes using heptafluorobutyric anhydride (HFBA) at 70°C for 30 min. The LOQ of the method for amphetamine is 20.0 ng/mL, whereas for methamphetamine, ephedrine and pseudoephedrine is 10.0 ng/mL. The recoveries of the method for all analytes are higher than 83%. Volatile substances were determined by GC-Head Space analysis.

Results: During the toxicological analysis of the victim's biological fluids, methamphetamine, amphetamine, ephedrine, pseudoephedrine and paracetamol were detected in urine, while methamphetamine, pseudoephedrine and paracetamol were found in blood. Acetone was also determined in blood at a concentration of 110 mg/L.

Conclusions: The socioeconomic conditions of a country also affect the community of drug addicts and lead them to synthesize alternative drugs and substitutes that sometimes are extremely harmful for their health or public health in general, as their production in clandestine laboratories poses risks to the whole surrounding environment due to possible explosions. Furthermore, the expanded use of "shisha" contributes significantly to the high increase of HIV infected people in Athens. This is probably due to the intense sexual stimulation provoked by "shisha", the concomitant decrease of restraints and the subsequent no protective measures among drug users.

Keywords: Shisha, Methamphetamine, Clandestine laboratory, Greece