

Poster Abstracts

PO-28

A PROSPECTIVE STUDY EVALUATING THE SENSITIVITY AND SPECIFICITY OF TWO DIFFERENT RAPID ORAL FLUID TEST (ROFT) KITS ON COMMON ABUSED DRUGS IN PATIENTS WITH SUBSTANCES ABUSE

Dr. VCH Ng, Dr. FL Lau

Hong Kong Poison Information Centre, United Christian Hospital

Objectives: To compare the sensitivity, specificity and clinical use of two different brands of rapid oral fluid test (ROFT) on ketamine, cannabis, MDMA, metamphetamine, cocaine & opioid in patients with suspected substances abuse.

Methods: This is a single-centered prospective cohort study of diagnostic test. Patients suspected to have drug abuse were tested using two commercially available rapid oral fluid tests (ROFTs)- Securetec DrugWipe 5S (kit 1) and SalivaScreen (kit 2). The sensitivity, specificity and accuracy of both tests were calculated using the laboratory urine toxicology screening results as the reference standard.

Results: Securetec DrugWipe 5S (kit 1) and SalivaScreen (kit 2) have comparable results in terms of sensitivity, specificity and accuracy. SalivaScreen (kit 2) has additional entities of MDMA and opioid. However, SalivaScreen (kit 2) needed more oral fluid, thus more time (in terms of minutes vs seconds) and difficulty in collecting sufficient amount of oral fluid for the test. The failure rate of using SalivaScreen (kit 2), 27.3%, is higher than that of Securetec DrugWipe 5S (kit 1), 1.7%.

Although the sensitivity of both ROFTs varied in different types of drug of abuse, they have 91%-100% specificity and 82-100% accuracy, which are comparable to that of bedside urine immunoassay test. ROFT can potentially be employed as an alternative investigation for rapid diagnosis of patients with suspected drug abuse.

Conclusion: Securetec DrugWipe 5S (kit 1) and SalivaScreen (kit 2) have good and comparable results of sensitivity, specificity and accuracy in detecting recent abusive drug exposure. However, the use of Securetec DrugWipe 5S (kit 1) was more practicable and feasible.