Monitoring of abusers by clinical laboratory tests and eye pupil examinations

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Abstract
In this study (n=500) fresh blood and urine samples of male abusers were recruited to distinguish abuse drugs and some treatment drugs. All the study population were male, and their age range was mean ±SD=41±21. They had often history consumption of the abuse drugs and take other medication too. All data were collected and analyzed by one-way ANOVA and t-test before and after detoxification. The rapid strip methods and their eye pupils' variations determined abusers' treatment conditions. When comparing the test results p-value: 0≤0.05 was considered as significance level. Treatment duration follow-up of all abuser's urine samples indicated and analyzed by one-way ANOVA and t-test before and after detoxification. The rapid strip methods and their eye pupils' variations determined abusers' treatment conditions.

Methods and materials
In this study a number of 500 male abusers who had addictive substances and drugs abuse such as opium, heroin, methadone, cannabis, methamphetamine, were selected and above-mentioned substances abuse form along with research participation consent form were filled for them. Each abuser subject was asked to give a fresh sample of his urine to the laboratory before detoxification. Samples were collected to do the tests. The urine were tested by rapid strips after adding some droplets of amoniaque solution, sensitivity of which is 300 Ng/ml to abuse drugs and then the results were recorded. In this study, all of the urine samples of abusers who were detoxified without using drug were tested after improvement using above-mentioned method and the results were recorded after treatment. Moreover, before detoxification confirmation of abusing and their eye pupil variation results were recorded, too. In this research, all male abusers who participated in the study gave about 100 cc urine sample to the laboratory for being tested before and after treatment. The use some droplets of amoniaque solution in urine of abusers before their test significantly remove false negative results. All of the abusers had smoking, alcohol, pain-relief and sedative medicines history [1-12]. Majority of the abusers had relatively long history of using addictive substances or drugs for more than five years. Some biochemical tests such as liver enzymes experiments were conducted on the blood samples of the study population and then their results were recorded. Moreover, some studies were also carried out to investigate anemia level of the abusers. Results of all above-mentioned tests have been shown in results the tables [10-19].

Results
In this research all data were obtained from questioners and related tests results. Table 1 Shows number of some of the Consumption history with tested between the study populations. As it can be seen in the table use of abuse substances such as

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heroin, opium and cannabis drugs is becoming prevalent. Table 2 shows number of positive and negative results of prevalence of abuse substances (e.g. Heroin, opium and methamphetamine, cannabis drugs…) based on the addicts age and use history before detoxification and after treatment among urine samples and according to the rapid strip tests. Table 3 shows check of eye pupils variations in some the abusers. Table 4 shows negative results confirmatory through application of rapid strip tests above 35 years old abusers. In this study after data collection, results were compared before and after detoxification periods and then one way ANOVA and t-test statistical analyses were conducted on the data and finally p≤0.05 was considered as significant for all statistical population [1-5,8].

### Discussion

Abusers who consumed narcotic and motivation abuse drugs in this study. They had often history consumption of the other following drugs abuse such: Heroin-Morphine-Codeine-Cannabis-Methadone-Tramadol-Buprexin-Methamphetamine-cocaine…. too. Also they had used other medication such: BNZ, TCA, MAO, Vitamins, Minerals, Anti hyperlipidemia and anti-hypertension and antipsychotic drugs, anti-cancer… supervision of clinics physicians. The rout of abuse drugs consumption between of abusers were often oral and sniffing but some of them had injected situation. In this study constriction (Myosis) and dilation (Mydriasis) of eye pupils of abusers were checked through

| Table 1. Shows number of some of the consumption history with tested between the study populations |
|---|
| **Drug names** | **Men** | **Consumption History** | **Abuser numbers** |
| **No** | **Abuse drugs** | **Ages Mean** | **Mean ± SD** | **month or year** | **N** |
| 1 | Herion | 52 | 2 yrs | N=500 |
| 2 | Metamphetamine | 42 | 2 yrs | N=500 |
| 3 | Opium | 42 | 4 yrs | N=500 |
| 4 | Methadone | 41 | 3 yrs | N=500 |
| 5 | THC | 43 | 2 yrs | N=500 |
| 6 | Bupernorphine | 31 | 2 yrs | N=500 |
| 7 | Codein | 61 | 3 yrs | N=500 |
| 8 | BNZ | 57 | 3 yrs | N=500 |
| 9 | TCA | 33 | 2 yrs | N=500 |
| 10 | BAR | 35 | 1 yrs | N=500 |
| 11 | Cocaine | 36 | 1 yrs | N=500 |
| 12 | TML | 50 | 2 yrs | N=500 |

Ages mean >30, N=500, BNZ: Bezdiazepines, TCA: Three Cyclic Antidepressants, BAR: Barbiturates, Meta: Metamphetamine, TML: Tramadol

### Table 2. Urine rapid strip test results during the period of before and after detoxification in population study of men groups

| No | Age | Consumption | Consumption History | Before detoxification | After detoxification |
|---|---|---|---|---|---|
| 1 | 61 | Mor | 21 yrs | >300 ng/ml | <300 ng/ml |
| 2 | 57 | Metha | 25 yrs | + | - |
| 3 | 56 | Mor | 22 yrs | + | - |
| 4 | 59 | Mor | 23 yrs | + | - |
| 5 | 54 | Metha | 25 yrs | + | - |
| 6 | 51 | Metha | 18 yrs | + | - |
| 7 | 48 | Mor | 17 yrs | + | - |
| 8 | 45 | Mor | 15 yrs | + | - |
| 9 | 42 | Meta | 16 yrs | + | - |
| 10 | 45 | Mor | 25 yrs | + | - |
| 11 | 41 | Mor | 18 yrs | + | - |
| 12 | 40 | Meta | 14 yrs | + | - |
| 13 | 59 | Mor | 13 yrs | + | - |
| 14 | 43 | Mor | 10 yrs | + | - |
| 15 | 38 | Mor | 11 yrs | + | - |
| 16 | 33 | Meta | 6 yrs | + | - |
| 17 | 32 | THC | 8 yrs | + | - |
| 18 | 34 | Meta | 15 yrs | + | - |
| 19 | 38 | THC | 20 yrs | + | - |
| 20 | 31 | Mor | 18 yrs | + | - |
| 21 | 36 | Meta | 14 yrs | + | - |
| 22 | 31 | Meta | 6 yrs | + | - |
| 23 | 46 | THC | 4 yrs | + | - |
| 24 | 44 | Mor | 6 yrs | + | - |
| 25 | 44 | Mor | 23 yrs | + | - |
| 26 | 43 | Metha | 21 yrs | + | - |
| 27 | 59 | Mor | 25 yrs | + | - |
Table 3. Shows check of eye pupils variations in the some abusers of study group

| No | Age | Consumption | Urine rapid strip tests results | Myosis | Mydriasis |
|----|-----|-------------|---------------------------------|--------|-----------|
| 1  | 60  | Opium       | >300 ng/ml                       | +      | -         |
| 2  | 46  | Heroin      | +                                | +      | -         |
| 3  | 45  | Methadone   | +                                | +      | -         |
| 4  | 41  | Methamphetamine | +                           | +      | ∓         |
| 5  | 39  | Methadone+Meta | +                    | ∴      | ±         |
| 6  | 30  | Morphine+Meta | +                                | -      | ∓         |
| 7  | 37  | Morphine+Meta+Methadone | +                        | ±      | ∓         |
| 8  | 38  | BNZ+Morph+Meta | +                          | ±      | -         |
| 9  | 32  | TCA+Methadone | +                                | -      | ∓         |
| 10 | 30  | TCA+Morph+Meta | +                              | -      | ∓         |
| 11 | 31  | Morph+Methadone+BNZ | +                      | +      | -         |
| 12 | 36  | TCA+Methamphetamine | +                   | -      | ∓         |
| 13 | 39  | Opium+Heroin+Methadone | +                    | -      | -         |
| 14 | 40  | Opium+Heroin+TCA | +                            | ∓      | -         |
| 15 | 42  | Opium+Heroin+Meta | +                        | ±      | -         |

±: Mild myosis or mydriasis, pupils check, urine rapid strip tests results. Meta: Metamphetamine, Mor: Morphine (Opium or Heroin), BNZ: Benzodiazepine, TCA: Three cyclic Antidepressants.

Table 4. Urine test results have shown after detoxification process of some cases

| No | Consumption | Men | Consumption history | Urine rapid strip tests results |
|----|-------------|-----|---------------------|--------------------------------|
| 1  | Metha       | 54  | 5yr                 | <300 ng/ml                     |
| 2  | Metha       | 47  | 4 yr                | -                              |
| 3  | Mor         | 43  | 2 yr                | -                              |
| 4  | Mor         | 42  | 1 yr                | -                              |
| 5  | Meta        | 40  | 2 yr                | -                              |
| 6  | Meta        | 31  | 1 yr                | -                              |
| 7  | Metha       | 61  | 10 yr               | -                              |
| 8  | Metha       | 60  | 20 yr               | -                              |
| 9  | Mor         | 31  | 1 yr                | -                              |
| 10 | Metha       | 32  | 2 yr                | -                              |
| 11 | Metha       | 34  | 2yr                 | -                              |
| 12 | THC         | 59  | 3 yr                | -                              |
|    | Meta        |     |                     |                                |

Age >30, N=12, Negative results have after detoxification through Urine rapid strip tests results, (+), <300 ng/ml: Negative results (-), Rapid strip test, Abuser drugs (MA: Methadon, THC: Canabinoid, opioums). Meta: Metamphetamine, Mor: Morphine (Opium or Heroin) detection in men abusers Urine.

Conclusions

We conclude that between all drug analytical methods the cheapest and easiest tests of abuse drugs in urine samples is accessible test to distinguishing, the base function of Rapid strip test kits is Immunochromatography. They are made and available cheaper than other methods in clinical laboratory. According to background of this study, we will be recommended that to detection and diagnosis of other medicinal or drugs poisoning rapid strip test kits with sensitivity.
above 300 ng/mL are usefulness. Also, other physical examination of physicians are requirement.

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