Clinical and laboratory diagnostic criteria for driving licence regranting.

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INTRODUCTION

Procedures for driving licence regranting to illicit drug users are often dishomogeneous, due to the absence of clear international and national legislative directives (Nickel et al., 1995). This paper describes results obtained by means of toxicologico-forensic ascertainments in driving licence regranting. Methodological procedures consisted of clinical investigations, acquisition and custody of biological samples, toxicological analysis, and interpretation of results.

EC Directives

The European Community directives regarding driving licences are the First Council Directive 80/1263/EEC and the Second Council Directive 91/439/EEC (De Gier, 1993). The latter directive states that driving licences shall not be issued or renewed in the following cases: applicants or drivers with drug addiction or regular abuse of drugs; absence of authorized medical opinion in supporting regular use of psychotropic substances in quantities absorbed that cause impairment. Authorized medical opinion is always necessary in cases of driving licences of higher category being granted to subjects undergoing psychotropic treatment.

The directive does not provide guide-lines on diagnostic procedures.

Administrative procedures for driving licence granting and regranting in Italy

In Italy, the local Prefectures provide for the granting, suspension and revocation of driving licences. Proper psychological requirements are verified by asking driving applicants to produce a health certificate and to undergo some clinical examinations. When health certificates or clinical examinations show consumption of psychoactive substances, verification passes to Local Medical Commissions, which seek the advice of specialists
working for public structures, who then carry out comprehensive clinical and laboratory ascertinations.

In criminal cases, such as convictions for driving under the influence of alcohol or illicit drugs, regranting of suspended licences is carried out by the local Prefecture. Verification is assigned to the above-mentioned Local Medical Commissions. Fitness to drive is excluded when drug abuse and/or addiction are ascertained; driving licences may be granted in cases of previous addiction but granting is subordinate to evaluation of the candidate’s risk of recidivism.

When granting or regranting licences of higher categories (respectively including motor vehicles weighing more than 3.5 tonnes, buses, articulated trucks and buses), evaluation is required to pay particular attention to the additional risks connected with driving such vehicles. In these cases, licences cannot be valid for more than two years.

The vagueness of the legislation leaves a wide margin of discretion to the Local Medical Commission in deciding which public structures should effect verifications (Institutes of Legal Medicine, Centres of Forensic Toxicology, Drug Treatment Units). The situation also leads to an extremely heterogeneous range of investigation in Italy.

**MATERIALS AND METHODS**

1750 subjects, either already drivers of vehicles or applying for driving licences for the first time, suspected of taking psychoactive substances, were submitted to medico-legal ascertainment by the Centre of Behavioural and Forensic Toxicology of the University of Padova, over the five-year period June 1991-June 1996.

Applicants were examined upon the request of the Local Medical Commission charged with issuing certificates of fitness to drive road vehicles and motor-boats.

The investigative procedure involved the following operational phases (Ferrara et al., 1991).

1. Questionnaire regarding clinical history and drug use.
2. Objective physical examination (general, neurological and orthopedic).
3. Objective semeiological examination with toxicologico-forensic emphasis.
4. Videotaped collection of 9 urine samples taken over a period of 30 days.
5. Chemico-toxicological screening using immunochemical (EMIT) and confirmation techniques (GC-MS) for the following substances: amphetamines, cannabinoids, cocaine, methadone, opiates (Tedeschi et al., 1992).
6. Compulsory re-examination of subjects in cases of discordant clinical and/or laboratory results.

RESULTS

Application of the above methodology led to the identification of 222 unfit subjects (12.6%) (Fig. 1): 200 were positive on the laboratory tests; 21 had adulterated urine samples; and one interrupted ascertainment (Fig. 2).

Figure 1: Applicants examined

![Figure 1: Applicants examined](image)

Figure 2

![Figure 2](image)
The following psychoactive substances were identified in the 200 positive cases: opiates (138), cannabis (36) and cocaine (26).

Applicants undergoing methadone treatment were excluded from our ascertainmnet, following the decision of the Local Medical Commission of the Veneto region not to grant driving licences to such subjects.

258 (6.7%) laboratory results were negative but had a clinical diagnosis of suspected intake of psychoactive substances. The applicants in questions were required to undergo re-examination one month later, and 24 (10.7% of recalled cases) were still taking such substances.

DISCUSSION

The above methodology is a brief example of the role that Forensic Toxicology (clinical and laboratory) may play in diagnosing the occasional use, abuse and addiction to psychoactive substances.

Critical review of a preceding investigative protocol, mainly based on laboratory results, led to the implementation of clinical examinations, both anamnestic and semeiological. The questionnaire relating to clinical history and previous drug use was particularly useful. It satisfied the diagnostic criteria of DSM-IV, the apparent lengthiness of which turned out to be effective in revealing applicants’ deliberate dissimulations and/or minimizations. The general and semeiological examinations identified several cases of suspected recent intake, with negative urine samples. Compulsory re-examination of suspected applicants allowed clinical and laboratory results to be verified, and was effective in identifying subjects who had deliberately interrupted their drug intake before laboratory ascertainment.

Urine samples were collected with particular attention to the integrity of the chain of custody. “Adulterated” samples were revealed by videotaping, followed by verification of the pH and specific weight of the samples, in order to identify possible cases of artificial dilution with water or excessive water intake.
Positivity on the immunochemical tests, subsequently confirmed by GC-MS, turned out to be essential, and allowed us to demonstrate that 23 samples which had been positive on immunochemical screening for opiates and amphetamines were in fact negative.

Our experience indicates that, in order to carry out ascertainments, the driving licence authority should choose structures outside the ambit of structures treating the persons in question (public services, usual doctor), due to the complex implications inherent in the doctor-patient relationship. These structures (or doctors) should only be involved at the moment of acquiring medical documentation, by means of requests made by the applicants (problem of professional confidentiality), and should include a "reward" mechanism for subjects who use a treatment service.

**RÉFÉRENCES**


Tedeschi L, Frison G, Castagna F, Ferrara SD (1992), Comprehensive EIA/GC screening and GC/MS confirmation of psychoactive substances in blood and urine. In Ferrara SD, Giorgetti R (Eds), Methodology in Man-Machine Interaction and Epidemiology on Drugs and Traffic Safety, Addiction Research Foundation of Italy, Padova, pp. 147-166.