(Mis)use of Benzodiazepines among High Risk Drug Users

Lisbon, 25 September 2014
**BDZs Use**

**BDZs** act as:
- anti-anxiety agent
- anti-convulsant
- myorelaxant
- to treat insomnia

**Barbiturates** are not more usually used in clinical practice with some rare exception in anesthesia.

BDZs are one of the most drugs sold from the pharmaceutical industry!
Actions of BDZs on Brain

Brain Areas

Site of Action

Cl⁻ ion
BDZs Effects and Dose-Response

CNS EFFECTS

INCREASING DOSES

Coma

BARBITURATES

Depression

BENZODIAZEPINES

Anesthesia

Hypnosis

Sedation, Anti-Anxiety

Possible selective anticonvulsant & muscle-relaxing activity
BDZs Mis(use)¹: “The Dark Side of the Moon”

The most people that engage BDZs misuse are:
- people who smoke, drink alcohol, take drugs of abuse and/or OTCs
- young people who experiment with drugs
- detainees (specially if drug users)
- patients in treatment with agonist treatment (in OST)
- polypharmacy amongst the elderly

The Polydrug Use is the greatest common denominator of the above people!

¹ The use of a drug for a non therapeutic effect
Polydrug Use: Definition

The **concurrent use** of multiple drugs (e.g. heroin, cocaine, alcohol, ecstasy, etc.), or the **combining drugs** (alcohol + cocaine; heroin + cocaine, etc.).

It can occur in a range of patterns and for a variety of reasons, and **may or may not involve drug dependence**
Typologies of Polydrug Users

**Type A:** Individuals that are not drug addicts from any substance (uncommon in BDZs users)

**Type B:** Individuals that are drug addicts from a class of substances (e.g. BDZs) but not from another (e.g. Ecstasy)

**Type C:** Individuals that are drug addicts from several classes of substances (e.g. BDZs, alcohol, cocaine)
BDZs Effects on Polydrug Users (the “wanting” effects)

- Rewarding effects
- Euphoric effects
- Intoxication (Buzz or Trip effect)
Role of BDZs in Polydrug Users (1)

• To increase the effect of a drug (e.g. the use of a BDZ to potentiate the effect of heroin)

• To reduce the effect of a drug (e.g. the use of BDZ to reduce the effect of cocaine)

• To substitute the effect of a lacking drug (e.g. the BDZ use in place of heroin or alcohol)
Role of BDZs in Polydrug Users (2)

- To reduce the unpleasant effect of a drug (e.g. the BDZ use to treat the insomnia induced from cocaine, methamphetamine, etc.)

- To “self-medicated” the withdrawal drug induced (e.g. the BDZ use to treat withdrawal syndrome in alcoholics, heroin addicts, methamphetamine users, etc.)
Pharmacological Interactions in BDZs Polydrug Users

- Additive Interactions (e.g. BDZs + alcohol)
- Antagonistic Interactions (e.g. BDZs + cocaine)
- Synergic Interactions (e.g. BDZs + heroin)
Main Clinical Characteristics in BDZs Polydrug Users

- High doses
- Long term use
- Use of BDZs with short half time
- Craving for BDZs
Prevalence of BDZs Mis(use) in Polydrug Users: An Estimation

- + 60% Italian Treated Drug Users are Polydrug Users (about 180,000 persons)

- + 70% Italian Treated Drug Users are BDZs users (about 210,000 persons)

- + 40% Italian Treated Drug Users Misuse BDZ (about 120,000 persons)

Estimation FeDerSerD, 2014 (based on MeToDo and Orpheo Study) unpublished data
(Mis)use of BDZs in Prison Population: Italian Data from PRIDE Study

Data from 38 Italian Prisons (about 15,000 detainees)

• 57% of detainees misuse BDZs (in high doses and for long term period)

• 85% of detainees with drug problems misuse BDZs
# Most BDZs mis(used) in Italian Prisons: Italian Data from PRIDE Study

<table>
<thead>
<tr>
<th>BDZ</th>
<th>% of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lormetazepam</td>
<td>45%</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>23%</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>18%</td>
</tr>
<tr>
<td>Alprazolam</td>
<td>7%</td>
</tr>
<tr>
<td>Other BDZs</td>
<td>7%</td>
</tr>
</tbody>
</table>

FeDerSerD Data from Italian PRIDE Study, 2014
(Mis)use of BDZs in Substitutive Treated Patients in Italy

• 51-70% of substitutive treated patients (mis) use BDZs

• 18-54% of patients that begin a substitutive treatment need of BDZ detox
Complications of BDZs (Mis)use in Patients in Agonist Therapy (1)

- Increase of overdose (also in subjects in agonist treatment): GABAergic mechanism

- Reduction of naloxone effect

- Higher risk of severe dependence and withdrawal

- Higher risk to develop lifetime alcohol and/or cocaine addiction
Complications of BDZs (Mis)use in Patients in Agonist Therapy

• Higher risk of drop-out

• Higher risk of depression and use of drugs

• Higher risk of psychiatric co-morbidity and admission to Hospital

• Higher risk to contract infection disease (e.g. HIV e HCV)
Treatment of BDZs Misuse in Polydrug Users

- Share the outcomes and the priority with patient ("share the agenda")

- Detox after "psychosocial stabilization"

- Detox one drug at a time

- Detox only after the "after care program" definition

- Detox step by step (first stabilize, after detox)
Conclusions

On Treatment

• Risk Minimization (reduction of overdose deaths, episodes of intoxications, infection diseases, ect.)

• Brief and Early Intervention (e.g. Motivational Interventions)

• Withdrawal Treatment (Cross Tolerance): Step by Step
Conclusions

On Research

• Need of epidemiological data on BDZs misuse (both in high risk drug users and in general population)

• Both drug users and detainees may represent an excellent paradigm for the study of BDZs misuse in general population
Felice Nava, MD, PhD

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