

## Adaptation of Method Dáder in an Addict Patient to Benzodiazepines Self-Medication

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**Abstract:** The Dáder method has showed in several times efficiency and effectiveness in the pharmacies-therapeutic pursuit in hospitable and deprived pharmacies. This relationship between primary attention professionals helps to the identification of problems related to patient's medication and promotes the deteriorated integration of the pharmacist in the health equipment. The present work adapted the Dáder method with the objective to improve the life quality of a patient who self-medication with benzodiazepines. It was studied this case to identify and to solve the Problems Related to Medicines (PRM) that the patient suffered. The method was applied during 8 months and the results obtained during the patient's following were evaluated since the pharmaceutical attention began until he accepted psychiatric aid. It was observed five different stages with the profiles obtained during the addict patient concurrence to the pharmacy. In 1st and 2nd stage the patient continued with self-medication. In 3rd stage left the psycho-pharmacies during one week, but he suffered abstinence symptoms that induced him to self-medication again. In 4th stage the patient recognized his addiction and finally in 5th stage he accepted psychiatric aid. The self-medication with benzodiazepines constituted an attention call since it happened in a countryside, where this health problem is not prevalent. The Sanitary Education to the patient allowed the rational drug use and to know the need of a suitable professional, in this case the medical psychiatrist.

**Key words:** Self-medication-benzodiazepines-dáder method

### INTRODUCTION

The Psycho-pharmacies are chemical substances that alter the mental behaviours, humour, perception or functions, which means they modify certain cerebral biochemical or physiological processes<sup>[1,2]</sup>. There are six categories of psycho-pharmacies depending on their psychological effects or on the behaviour: Hypnotics, analgesic narcotics, stimulating euphorizants, psychotropic hallucinogens, alcohol and psychotropic agents<sup>[3]</sup>. The hypnotic agents, among them the Benzodiazepines (BZD), include the cerebral depressing like somniferous or anxieties, if they are use outside medical prescription like relaxants, tranquilizers or euphorizants is illegal. The majority produce addiction and some of them, when interrupting their ingestion, can cause serious syndrome of abstinence. The messages between the different nervous cells (neurons) are transmitted through electrical or chemical stimuli. The connection between neurons or synapse settles down through neurotransmitters, chemical substances also called neuro-regulators, which are synthesized from

precursors, in the Rough Endoplasmic Reticulum (RER) of soma neuronal. There are a several number of neurotransmitters; glutamic acid (Glu), the Gamma-Aminobutyric Acid (GABA) and the Acetylcholine (Ach) are the most important. A lot of number of designed medicines used to modify cerebral chemistry has analogy with the precursors or in same cases with the neurotransmitters. The specific receptors, in the Central Nervous System (SNC) for the Benzodiazepines (BZD), are members of the complex GABA, neurotransmitter with inhibiting action, which receptors are involved in an inhibiting bidirectional system in relation with different areas of the SNC<sup>[4]</sup>. The BZD receptors are in all the brain and the spinal marrow; also they are in the adrenal glands, kidneys, pineal gland and blood platelet. The BZD are drugs which have hypnotics, anxieties, anticonvulsive, amnesic and myo-relaxants effects; they depress principally the limb system and their effects are dose-employee<sup>[5]</sup>. If they are used like a tranquilizer or an anxiolytic, low doses are needed; if the prescription looks for a sedative or myo-relaxant effect, average doses are used, whereas to obtain a hypnotic effect high doses are

administered. When the maximum limits are surpassed, can occurred unconsciousness, surgical anaesthesia, comma and fatal depression in the respiratory and cardiac functions. The benzodiazepines are used in the neurosis treatment, mainly in cases of anxiety, emotional tension, obsessive hysteria, reactions, depressive states with tension, emotional upheavals, syndromes of abstinence produced by alcohol and barbiturates and in the control from some forms of epilepsy. The BZD share similar chemical structure, showing a benzene ring with six elements, fixed with another diazepam ring with seven elements<sup>[1,2]</sup>. The psycho-pharmacies are one of the pharmacologic groups more prescribed at the present time. We must accept that unsuitable use and self-medication of this kind of drugs are frequent in Argentina and this is contributed to the increase of drug-dependency. The anxiety is considered pathology when it interferes in the individual behaviour<sup>[6]</sup>. From the epidemiologist point of view it is known that between 5 and 10% of the population suffers or has suffered generalized anxiety and about the 30 and 70% of it has received pharmacologic treatment. In addition 30% of anxious patients drink alcohol or use drugs without prescription and in the 50% of cases transitory or absolute work absenteeism is accused. Finally between the 20 and 30% have familiar or conjugal conflicts and the 10 and 15% of them go at least once to the hospitable urgencies, constituting vulnerable populations to premature deaths and/or suicides<sup>[7]</sup>. The predominance of female sex with respect to the male one to suffer anguish crisis is 3:1; and the age of more frequent appearance is located between the second and third decade of life. Other factors that are involved in these crises are related to working activities, partner-relatives relationships and the genetic ones. The objective of the present work was to improve the patient quality of life who usually took medicines without the medical prescription (self-medication) He often used benzodiazepines, specifically Alprazolam or Bromazepam<sup>[8,9]</sup>.

#### **MATERIALS AND METHODS**

Patient: volunteer of 45 years of age, who use self-medication with Benzodiazepines. The Method Dader for following pharmacies-therapeutic was applied<sup>[10,11]</sup>; at the moment it is used in different countries by pharmacists. In cards and lists the personal data were registered, habits of life and Problems Related to the Medicines (PRM) that are ingested.

It was evaluated the pharmaceutical intervention necessary to solve the PRM and finally the obtained results were evaluated.

#### **RESULTS AND DISCUSSION**

The image of the Pharmaceutical Professional has been blurred by action of international the Pharmaceutical industry, thus during decades the Offices of Pharmacy were not nothing else that described mouths of expense. Perhaps the most harmful consequence was to eliminate the participation of the pharmacists of the sanitary equipment. An extreme example was the creation, during the decade of years 80, the Provincial System of Health (SiProSa) of Tucumán, Argentina<sup>[12]</sup>, since it does not contemplate to the Pharmacist like member of the body of professionals of the health. At the moment this omission is in period of revision, after numerous presentations made from the University and the School of Pharmacists before the provincial Legislative chamber. The Argentine citizens, in general, do not recognize the pharmacist like a professional integrated to the equipment of health, situation that gradually can be reverted, from new laws that impose, to the medical professionals, to prescribe by the name of the active principle of the medicine and not by the commercial name since they did it previously. The present legislation, we understand it is a challenge since he positions again to the Pharmacist like specialist medicine professional, for that reason must be enabled to advise and to assume the responsibility that fits to him, as the old druggists did. From the point of view of the patient, the loss of credited opinion of the pharmacist determined an increase to intolerable and dangerous levels of the self-medication. In this point we must stand out that in Argentina, for more than 30 years, an employee of Pharmacy with sufficient studies for reading and text understanding were the one in charge during most of the day of gives it of medicines. The World-wide Organization of the Health impels in her documents the action of the pharmacist towards the society, from the pharmaceutical attention and/or pharmacologic monitoring. In an attempt to begin to revalue our profession, we made this work that we can fit it like a direction towards a responsible medication. González *et al.* detailed and explained the established thing in the Consensus of Granada (Spain) with respect to the classification based on the three basic necessities of the pharmacotherapy (5): a) Necessity that the medicines are indicated (PRM 1). The patient does not use the medicines that need or the patient uses medicines, but does not need it (PRM 2); b) Necessity that the medicines are effective (PRM 3). The patient uses a dose lower than that necessary (PRM 4); c) Necessity that the medicines are safe (PRM 5). The patient uses a dose higher than that necessary (PRM 6). The patient uses a medicine that causes an adverse reaction or ram to him).

**Table 1: Pursuit of the patient during the pharmaceutical attention**

Picture of pursuitstages					
Stages	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Duración	3 months	2 months	2 months	1 month	8months
Achivements	Reduction 30% number cigarettes/day Migraine: slight improvement	1-2 cigarettes/week	7 days without Benzodiazepines	Accepts that the self medication damages his health	Accepts the aid of a Psychiatrist
Observations	Uses psycho-pharmacies without modification	Uses psycho-pharmacies Improvement of migraine	Uses psycho-pharmacies	Reappears migraine	
Effects	Insomnia e Irritability libido reduction	Insomnia and Irritability libido reduction	Insomnia, Irritability and nervousness increased	Insomnia and Irritability libido reduction	

On the basis of the precedent details, it is absolutely clear that the self-medication, in all its manifestations, is opposed to the mentioned Consensus, because does not fulfil the first basic necessity of the pharmacotherapy.

**Conceptual frame:** The patient with apparent good state of health resided in the locality of Garmendia, distant 100 km from the capital of Tucumán-Argentina. Garmendia is countryside of 3000 inhabitants. One of his sisters worked in the zone hospital. The patient referred that 4 or 5 years ago, oral self-administered Alprazolam (1 mg) or Bromazepam (3 mg), one or another one in alternative form, to sleep during nights. The medication was obtained from his sister nurse, who had access to the Hospital Pharmacy. At the time of beginning the Pharmaceutical Attention, he confessed irritability, nervousness, insomnia at night. This behaviour caused familiar and business problems. In addition he suffered migraines and diminution of the libido. He related that he suspended during 1 week medicines, but he felt worse. Years ago it began to smoke 7 or 8 cigarettes per day. Pharmacists, professional medicine specialists, must detect and solve patient's Problems Related to Medicines (PRM). According to the Consensus of Granada the PRM are problems of tie health with the pharmacotherapy and that interferes or can interfere with patient health<sup>[13]</sup>. On the basis of exposed it can to assure that the self-medication is a PRM example and the pharmaceutical attention, during this kind of problem, is very necessary. The patient following since that the pharmaceutical attention begins until he accepts psychiatric aid it is summarizes in Table 1. This table shows 5 differentiated stages with profiles obtained during the concurrence of patient to the pharmacy. The participation of the Pharmaceutical Professional, in the first stage, 3 months, allowed that the patient diminished 30 % the number of daily cigarettes, although continued with the use of psycho-pharmacies. During the second stage, that extended by 2 months, with the pharmaceutical attention the patient smoked 1 or 2 cigarettes per week, but the consumption of psycho-pharmacies could not be modified. In the course of the third stage he suspended the use of Benzodiazepines during one week, but the

patient suffered an increase of irritability and nervousness. He did not feel improvement without medication so he returned to self-medication of psycho-pharmacies. The fourth stage, with duration of 1 month, was characterized by the acceptance, from the patient, that the medicines that used as sedative were the cause of his problem of health, perhaps this admission was a consequence of the reinforcement of the pharmacist-patient relation. The fifth stage, began when the patient admitted the need of a psychiatrist. The pharmacist talked with the doctor so he took care of the addict and evaluated therapeutics strategies.

The health professionals must centralize their performance in the patient; nowadays the patient must be involved in therapies decisions, contrary to the old models in which the patient only received prescriptions without participation on the selection of the pharmacies therapeutic strategy. This is a case of self-medication, very frequent in Argentina, because of the easy to obtained psycho-pharmacies. During the time that the patient had not being taking benzodiazepines (third stage) he suffered several health problems, perhaps during this period a syndrome of abstinence was pronounced. The success of the pharmaceutical attention was achieved when the patient accepted receive aid of a medical psychiatrist, after 8 months of patient following by the pharmacist.

This benzodiazepine self-medication problem was an attention call because it happened in a countryside, where this type of PRM it had not been observed frequently. The pharmaceutical attention helped to improve the patient's life quality. In relation to the problems caused by medicines and sanitary education it was achieved the patient's rational drug use and the interaction of the pharmacist with other health professionals.

In Argentina the existence of pharmacies-therapeutic programs is limited, or they not exist. The medical professional does not accept the collaboration of the pharmaceutical professional to design a pharmacies-therapeutic strategy. This work, tried to adapt the Dader method for the pharmacies- therapeutic pursuit of an addict patient to Benzodiazepines and to demonstrate the importance of the pharmaceutical interventions.

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