Clinical case of rapid opiate detoxification under anesthesia.

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Summary

Feminine patient of 42 years old, infirmary that has been addicted for 2 years to an opiate, tramadol, that consumes oral way a maximum of 6 daily grams.

Discusses opiate detoxification with general anesthesia.

Key words

Rapid opiate detoxification. Opiate dependence. Naltrexone. Dexmedetomidine.

Introduction

Traditionally the detoxification of the dependent patients to opiate has been made by means of the drug substitution by an opiate of long half life. With the use of falling dose of methadone in a near period to 21 days[1], or of other agonists opiate[2], and the progressive reduction of the dose. It has also been used clonidine or dexmedetomidine together with antagonistic of opiate (program free of drugs), as Naltrexone, that which has allowed to go reducing the duration of progressively detoxification, being denominated in occasions to these techniques as rapid detoxifications[3]. From final of the years eighty, were expanding the rapid detoxifications, which consist on a variation of the previous ones: the detoxification takes place when precipitating the withdrawal syndrome when administering an antagonistic opiate under anesthesia[4 5]

The detoxification process for which a dependent individual abandons the consumption, seeks to eliminate the sharp physiologic dependence and to diminish the severe reactions that appears in the withdrawal syndrome, besides contributing to addicted patients remains abstinents[6].

The ultrarapids detoxification should satisfy three conditions:

* In this process the detoxification is taken place in less than 24 hours (total duration of the process from the beginning until the medical discharge).

* It is administered at least a complete dose the antagonist's (Naltrexone 50 mg or nalmefene; in occasions it is also used Naloxone).

* A wide variety of drugs is used to control the withdrawal syndrome.

It is necessary to keep in mind what characterizes ultrarapid detoxifications:

a) The speed.

b) A good clinical control of withdrawal syndrome, as well as the perception for the doctor and the patient.

c) Physiopathology treatment , especially starting from the works of Gold MS. that it used clonidine on the hypothesis that many signs and symptoms of the withdrawal syndrome are mediated by the locus coeruleus with an important quantity of adrenergics receptors alpha 2 (hiperactivity of the locus coeruleus).

The detoxification and later maintenance with antagonistic opiate constitute an alternative in the deshabituation programs. The Naltrexone causes a complete blockade of the receiving opiate during a long period of time due to its long half life. Their objective is to block the effects of the opiate in its receivers, facilitating the extinction of the blunting the euphoric effects and cravings for opiates [7].

The advantages of short detoxifications are those that allow to shorten time of detoxification without increasing the intensity of the withdrawal syndrome, they present bigger percentages of success in detoxification and allow to begin a maintenance with Naltrexone in shorten time with a continuity between the detoxification and these treatment[8].

Thats why is preferable the detoxifications with agonistics opiate (methadone) that specify more time, they don't allow the early use of antagonistic and show very few results[9]. The agonistics alpha-2-adrenergics (clonidine or dexmdetomidine) have a fundamental paper in the detoxification to reduce the hiperactivity noradrenergic that appears in the syndrome of a withdrawal syndrome[10,11], and they are used in combination with Naltrexone[12,13].

The Naloxone and Naltrexone or Nalmefene have been used in detoxification treatment what is denominated induced or precipitate withdrawal syndrome. Already in 1973[14] it was observed that the intravenous administration of Naloxone, although it precipitates the withdrawal syndrome, it is able to reduce their duration. Starting from 1982 begins the combined use of Clonidine and Naltrexone in hospital. It means as a rapid and sure method of methadone detoxification and opiate like the heroin [15, 16] The later studies try to shorten the period of detoxification carrying out it in 1 or 2 days.

The Naltrexone possesses an antagonistic activity practically pure over the opiate receptors.

Their clinical utility comes given basically because:

– It facilitates the extinction (extinguishes) the behavior of auto administration opiate. The opiate doesn't carry out their effect, because receivers are blocked. The remainders are not able to interact on the receivers, they are blocked.

–It diminishes the desire or drug longing (craving), mainly to the beginning of treatment.

- It diminishes the abstinence conditioned to the stimuli related with the previous consumption, as well as the slowed of abstinence.

The rules of rapid induction allow to carry out the sharp process of detoxification in approximately 24 hours or less.

To get the detoxification the key drug it´s Naltrexone (antagonistic opiate of long half life that is absorbed well by oral way and displaces of the agonistic from the receptors). The agonistics alpha-2 (clonidine or dexmdetomidine) allow an appropriate control of adrenergic syndrome and they are used in all techniques, either the clonidine or the dexmdetomidine. Ondansetron is a serotonin receptor antagonist, is administered to attenuate nausea and vomiting associated. Ansiolitics are used for control agitation.

Diverse rules exist at the moment. The first rule began taking Naltrexone in the first day to low dose; carrying out the complete detoxification in 3 days[17] In 1994 the first results were published with different procedures, using midazolam for sedation. Following this technique was described alone a case of complication with possible lung edema, or

secondary hipoxemia to sedative and laringospasme for oral secretions in slight anesthesia.

Seoane and col. describe detoxification with conscious sedation monitored in intensive cares in a sample of 240 patients. It is the rule of these authors that has served as guide for many of professionals that carry out this detoxification type.

Treatment with Naltrexone

The Naltrexone was synthesized in 1965 by Bulmberg and Dayton. From the first studies carried out in United States, Naltrexone has shown very interesting advantages for treatment the withdrawal syndrome to opiate.

Parallelly, it has scarce toxicity problems and secondary effects. Naltrexone hydrochlorate is a derived product of tebaíne, synthesized in 1965 by Blumberg and Dyton.

From the pharmacological point of view some peculiar of Naltrexone favor their use. Among the qualities that propitiate their use as antagonistic in maintenance programs it can stand out that it doesn't even produce tolerance neither dependence in long treatments; it is absorbed very well by oral way and it reaches maximum levels in one hour; it extinguishes the dangers of the withdrawal syndrome and it blocks the euphoria in answer to use opiate and, lastly, it produces scarce secondary effects.

In some pursuit studies carried out in addicts that carry out rapid detoxification they refer that at the 24 hours they continue deshabituation treatment, 85% and 73% of those that carry out these rapid rules in front of 55% of those that carry out classic rules. To the 6 months the retention is similar to those that carry out classic detoxifications, which oscillates among 35-50%.

Another study carried out on 120 selected patients studies retention in 9 months. The 83 patients that are located, 57% stays abstinent and 43% has relapsed. Those that have not relapsed have taken Naltrexone 2 months more than those that relapse. The retention a month was 74% in having relapsed and of 98% in abstinent; two months of 62% and 89%; 3 months of 44% and 64% and 8 months 9% and 28% respectively.

This investigation confirms that described in all the studies of pursuit of any addiction and with any therapeutic modality, like it is the narrow relationship among retention in the treatment and later abstinence. This study refers that abandonment at the beginning of the therapy associates with relapse in the consumption with more frequency than if it gives way later on.

They are relapse elements: not work expectations, beginning of consumption before 9 years old or after 47, to continue relationships with consumers, labor problems, family or legal problems, inadequate use of Naltrexone. Other studies find high rates of patients that complete the treatment once initiate the same one. Others point out that the later results not depend to detoxification way but of selection of patients and of later treatment factors including the régime of supervised Naltrexone.

Points to consider:

a) Inclusion approaches

In general it is admitted the failures repeated in classic rules. The adaptation is also studied from the technique to heroine's detoxification or of methadone or other substances.

b) Exclusion approaches

Some are unanimously accepted as the exclusion of patients that presents serious sharp organic pathology (serious cardiopathy, severe EPOC, inadequacy breathing, serious renal or hepatic) pregnant, nurslings. The chronic viral hepatitis or the infection for HIV usually are not exclusion trials.

Due to the high prevalence of co-existing disease, a thorough history and physical examination must be performed. Electrocardiogram (EKG) and chest x-ray are obtained to assist in cardiopulmonary evaluation. Laboratory tests for immunodeficiency syndromes, hepatitis A, B, C, and D and syphilis testing may be useful in this high-risk population; however, the presence of these infections is not necessarily a contraindication to the procedure. In general, patients with uncontrolled medical problems (ASA physical status III or more) are not good candidates.

Pregnancy is an absolute contraindication and a negative pregnancy test should be documented as appropriate.

The hepatitis activates with hepatic enzymes and AIDS with recount white sanguine cells smaller than 200 it is exclusion for some.

The structured psychiatric pathology is frequently exclusion reason, although not always

Clinical case

Patient feminine of 42 years old with antecedents of health that possesses an addiction to an opiate tramadol which consumes up to 6 daily grams with a 2 year-old time, she requests medical attendance and it is motivated to be liberated of that illness.

She goes into the University Hospital Calixto García and she is carried out psychiatric evaluation being discarded structured psychiatric pathology, is carried out a clinical analysis with Laboratory tests and chest x-ray illnesses are discarded **.**

She goes into the Unit of rapid Detoxification previous signature of informed consent.

Proceeds to carry out protocol of ultra rapid detoxification.

Vein is channeled, it is monitored parameters hemodynamic as well as expense urinal and temperature. 3 milligrams of intravenous midazolam are administered.

Continues by intravenous way with 150 milligrams lidocaíne, 200 milligrams propofol and 10 milligrams midazolam, Patients are paralyzed with succinylcholine and intubated with stem gold tracheal number 8. Patients are not routinely paralyzed for the duration of the procedure, due to the need to observe signs of withdrawal.

However, if necessary, a long-acting nondepolarizing muscle relaxant can be used in conjunction with mechanical ventilation.

She is placed how maintenance of anesthesia intravenous way propofol to 6 ml for kilograms per hour more 2 milligrams lidocaíne for kilogram per hour and 0.2 milligrams midazolam for kilogram per hour.

Probe is placed and 100 milligrams of Naltrexone are administered by probe nasogastric tube. Then 600 microgramos of Naloxone is administered.

They are presented abundant sialorrea how it leaves of withdrawal Syndrome that talks to escopolamine 20 milligrams, hipertermia, arterial hypertension that it is solved as the depth of the anesthesia is deepened.

When concluding detoxification after 12 hours its administered dexmdetomidine 200 microgramos in muscle, region of the deltoides.

The patient recovers very well with excellent functions cognocitive without dysfunctions of abstinence and she is given the high one with pursuit for consultation maintaining Naltrexone a pill of 50 milligrams for oral way every day at 4 in the afternoon except saturdays.

The patient diminished the consumption desire ostensibly and until today in a term of 15 days has not consumed tramadol.

Discussion

Although the detoxification, in itself, is not a definitive treatment, it is an indispensable step to begin abstinence. The duration of the process is correlated with more abandonments, more hospital stays and more relapses.

This detoxification method assures the same one in near 100% of cases, since administration of Naltrexone in a precocious way and during the low patient's permanency it anesthetizes it disables the high one voluntary and the detention of the treatment process. This is to our approach one of the main advances of this practice, since with other techniques more than 30% of those that began detoxification voluntarily interrupted it[19]

On the other hand, there are authors that report detoxification **in children** with illnesses added with good results[20].

The smallest duration in the process allows to diminish many of the problems that some addicts generate in the hospitalization rooms during the stay and to diminish the load to the sanitary personnel.

The advantages of this detoxification type are to provide an approach to the firmest abstinence, with shorter time, facilitating the access to therapeutic chain and a bigger

number of treatments. It would be useful for many addicts, but maybe more for those discharge it loads with shortcomings in classic detoxification. However it is not a treatment free of risk and it is necessary to value the dangers of it[21].

Some studies express that the risks come from not knowing the practice, and that the cost cannot be the only cause of not using it, since the addicts should be treated humanely. The revision studies reflect to consider that the problems are of security (when using oral medication without anesthesia) and risk/benefit of the anesthesia. It is necessary to also value the adverse effects and the patient's comfort, without forgetting that it is a treatment implored by the patients.

Most of revisions support the security of the technique carried out in the context of Cares Anesthetics, given their great approval among the addicts. It is considered that anesthesia offers security and it can be useful in patients that take a lot of time in treatment with methadone.

We outline the necessity of studies that indicate us the best technique to continue, without forgetting that it is not a treatment in yes, but rather it is included in a wider treatment, and it treats a defined pathology as chronicle[22].

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