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The Analytical Methods of Drug Analysis

**Research presented by the student Mohammed Shaker
Abdullah Habeeb to the College of Science - Department of
Chemistry, which is part of the requirements to obtain a
Bachelor of Science / Chemistry Sciences**

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا ۖ إِنَّكَ أَنْتَ }

{الْعَلِيمُ الْحَكِيمُ

صَدَقَ اللَّهُ الْعَلِيِّ الْعَظِيمِ

سورة البقرة/32

))Dedication((

To My Parents :

Dear my Father and my mother

To

My Sisters

To My teacher

Asst. Prof . Dr. Zaina Mohammed

To

The head of department of chemistry

To

All whom help me in my research

Lest of Contains

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Introduction

Addiction Is the condition resulting from the use of narcotic drugs on a continuous basis, so that the person becomes dependent on psychologically and physically, and even needs to increase the dose from time to time to get the same effect always, and so the addict doses that multiply in a short time to the extent that cause the most damage to the body and mind The person has the ability to perform his daily duties and duties in the absence of this substance. In the case of discontinuation of use, he or she has serious psychological and physical symptoms called "withdrawal symptoms" and may result in death or addiction: alcoholism, drugs, The Active.

- Reasons for an individual's risk of addiction:
- Ignorance of the dangers of using the drug.
- The weakness of the religious faith and socialization unsound.
- Disintegration of the family.
- Poverty, ignorance and illiteracy.

- Excessive richness and waste without reckoning.
- Parents concern about children, lack of supervision and guidance.
- Lack of conversation between the family members.
- Babysitting or associated with bad guys.
- Unemployment and vacuum.

Program for the promotion of drug quality, safety, and efficiency

Introduction Man is continuously challenged by his own creations. Drugs are no exception to this rule .The introduction of large numbers of new drugs during recent decades has caused concern among the medical profession research workers in the drug field, and the public in regard to both safety and efficacy. albendazole and gabapentin in commercial dosage forms. Sparfloxacin was determined by the non-aqueous titration method ^[1]. In addition to its application in drug estimation, titrimetry has also been used for the estimation of degradation products of the pharmaceuticals^[2]. But it was not until the tragic effects of thalidomide in the early 1960s that the procedures employed, which left evaluation of the safety and efficacy largely in the hands of the drug manufacturers and clinicians. Many analytical chemists describe this perspective as an analytical approach to solving problems .Analytical chemistry is the study of the separation, identification, and quantification of the chemical components of natural and artificial materials ^[3] ognized as mandated. Legislation governing the evaluation of both new and old drugs has now been adopted in many countries The manner in which the World Health organization can contribute to an improvement in drug evaluation has been discussed at various sessions of the governing bodies of WHO. The Seventeenth

World Health Assembly (1964) adopted a resolution (WHA17.39) requesting the Director-General to undertake, with the assistance of the Advisory Committee on Medical Research, the formulation of generally accepted principles and requirements for the evaluation of the safety and efficacy of drugs . A number of scientific groups and meetings have been convened in compliance with this request and their reports have been published in the WHO Technical report Series (see list of references, 2-11) The Twenty-fourth World Health Assembly, in resolution WHA 24.56, requested the Director-General to study how best the Organization could cope with its obligations and expand its activities, as required, bearing in mind the need for an overall approach to matters relating to (the discovery) ^[4].

Drugs are characterized by a huge diversity in their effect and effects on the body. There are drugs that increase the blood clotting and other deficiency, as there are medicines to expand the pupil and the other shrinking and sometimes the drug is a necessary substance for the body reduces its food or because of the disease^[5] . is what analytical chemists do . The craft of analytical chemistry is not in performing a routine analysis on a routine sample, which more appropriately is called chemical analysis, but in improving established analytical methods, in extending existing analytical methods to new types of samples, and in developing new analytical methods for measuring chemical phenomena. A more appropriate description of analytical chemistry is “the science of inventing and applying the concepts, principles, and strategies for measuring the characteristics of chemical system^[6] . Analytical chemists typically operate at the extreme edges of analysis, extending and improving the ability of all chemists to make meaningful measurements on smaller samples, on more complex samples, on shorter time scales, and on species present at lower concentrations. Throughout its history, analytical chemistry has provided many of the tools and methods necessary for

research in the other traditional areas of chemistry. A recent editorial on Analytical Chemistry entitled “Some Words about Categories of Manuscripts” nicely highlights what makes a research endeavor relevant to modern analytical chemistry^[7]. The study of the metabolic fate of drugs is an essential and important part of the drug development process, research of drug metabolism pathways, drug-drug interactions, drug-herb interactions, influence of genetic polymorphisms and other factors that influence the phase I and/or II metabolism of a drug. Different in vitro methods, from subcellular to organ range, and in vivo studies are applied for the clarification of drug metabolism. The analysis of metabolites in complex biological matrices is a challenging task therefore several analytical methods for qualification and quantification of drug metabolites are used. Liquid chromatography coupled with mass spectrometry has become the most powerful analytical tool for screening and identification of drug metabolites in biological matrices. However, adequate sample preparation is a key prerequisite aspect of successful quantitative and qualitative bioanalysis^[8].

Importance :

1. Study to the anesthetic materials in the human body .
2. To understand the composition of drugs related to treatment .
3. The mechanism action of disturbed matter in the human body .

Theory :

Chemistry is the study of matter, including its composition and structure, its physical properties, and its reactivity. There are many ways to study chemistry, but, we traditionally divide it into five fields: Organic chemistry, Inorganic chemistry, Biological chemistry, Physical chemistry, and Analytical chemistry.^[9]

Drug misuse and dependency :

Drug misuse harms the health and wellbeing of too many people. We want to reduce the number misusing illegal and other harmful drugs and increase the number who successfully recover from drug dependence. We want to restrict the supply of drugs by identifying and prosecuting those involved in the drug trade, and confiscating the proceeds of crime. Drug analysis includes the aspects of identifying novel drugs, assessing their affinity and specificity, characterizing their molecular structures, and testing their efficiency in vitro and in vivo. Nuclear magnetic resonance spectroscopy is widely used in screening for novel drug molecules as well as in structural and binding studies. ADDICTION Dementia is chronic poisoning due to the repetition of a particular substance in an involuntary manner beyond the will of the person, accompanied by an urgent desire to continue

the material and obtain it by any means, even if it is illegal ^[10]. The state of addiction is also characterized by a new private decline, which is an increase in the addict's ability to consume increasing amounts of that substance in order to obtain the desired effect. Quantities may be fatal to a few non-addicted people. This is what is claimed by the emergence of endurance and accompanied by endurance. This case claims psychological ^[11].

Official Compendia for pharmaceutical substances usually include the following parameters, namely ^[12]:

- Description of the Drug or Finished Product
- Identification Tests
- Physical Constants
- Assay of Pharmaceutical Substances
- Assay of Principal Active Ingredients in Formulated Dosage Forms
- Limit Test
- Storage Conditions

The description of a particular drug or finished product may essentially include the following details, namely ^[13]

- Brand Name of the Product
- Name of the Active Ingredient
- Strength of Active Ingredient in Dosage Form
- Lot/Batch Number
- Date of Manufacture
- Date of Expiry
- Storage Conditions (if any)
- Separate Dosage for Adults and Children

Research objectives for drug :

- 1- Distance from bad friends and
- 2- and who were the cause of the person's resort to addiction.
- 3- Raise awareness of the harmful effects of drugs on the individual, the family and society in general.
- 4- We have to convince the patient of his illness, and to confront him with his weakness towards these destructive materials and that his life in the presence of drugs is not only for destruction and death, and that in that case he goes in the way of losing himself and his work and his family and friends.
- 5- Before the beginning of the process of treatment of addiction after convincing the patient of the principle of treatment and leaving the drug and get rid of them finally to ensure the safety of the addict and assess the health to ensure the absence of HIV (AIDS), tuberculosis, and hepatitis B and C, or other Infectious diseases that can occur during drug abuse.
- 6- The beginning of the therapeutic trip by evaluating the doctors and the addicted to the hospital to seek treatment for addiction, and there is the presentation of the patient to the doctors and experts to take the necessary procedures for comprehensive health assessments, and this assessment to clarify the appropriate treatment plan for each patient based on the outcome of such assessments.

7- Follow-up should be done by the doctor. He should help the patient not to relapse and return to the drug again by giving him medicines that help him to reactivate the normal brain functions and reduce the desire to use drugs again. Of the non-use of any narcotics after treatment, where the statistics confirm that a large proportion of drug addicts return to it again during a year of recovery.

Different stages of addiction:

1. The habitual stage in which drugs are taken in order to get used to it without achieving psychological or organic results.
2. Endurance stage, which is a significant increase in the doses that are taken in order to reach the desired euphoria.
3. The stage of dependence in which the addict has reached the stage of full dependence on the drugs physically and psychologically and can never be dispensed with.

Psychological and mental damage:

Rapid disturbances and constant feeling of anxiety:

- There is a malfunction in the way the brain works and changes in brain composition in general.
- It may be up to the addict to try to commit suicide.
- The incidence of disturbances and disturbances in the perception of sensory, especially hearing and sight.

- In the perception of time, distances and sizes, time tends to slow and the perception of distances tends to grow, and the perception of sizes tends to increase.
- Difficulty, slow and dysfunctional thinking.
- Anxiety, tension, and a sense of constriction, decline and instability.
- Excessive nervousness, mood, tension, constant emotion, and extreme sensitivity.
- Neglect in appearance in self.
- Inability to work and inability to continue.

Disorders in the conscience after a dose Drugs control the sense of happiness and ecstasy and increase activity and a state of absence from existence and create a world of fantasy is full of fun and vitality and fun, and soon to wake up quickly of this feeling to return to fatigue and fatigue and regret and depression, the addict's feelings are very conflicting.

Imbalance in balance and injury convulsions and difficulty in speech and difficulty of expression and difficulty and imbalance in walking.

Breath test :

Breath test is a widespread method for quickly determining alcohol intoxication. A breath test measures the alcohol concentration in the body by a deep-lung breath. There are different instruments used for measuring the alcohol content of an individual through their breath. Breath test being used on a volunteer. Breathalyzer is a widely known instrument which was developed in 1954 and contained chemicals unlike other breath-testing instruments ^[10] . More modernly used instruments are the infrared light-absorption devices and fuel cell detectors, these two testers are microprocessor controlled meaning the operator only has to

press the start button. To get accurate readings on a breath testing device the individual must blow for approximately 6 seconds and need to contain roughly 1.1 to 1.5 liters of breath. For a breath-test to result accurately and truly an operator must take steps such as avoiding measuring “mouth alcohol” which is a result from regurgitation, belching, or recent intake of an alcoholic beverage ^[14] . To avoid measuring “mouth alcohol” the operator must not allow the individual that’s taking the test to consume any materials for at least fifteen minutes before the breath test. When pulled over for a driving violation if an individual in the United States refuses to take a breath test that individual's driver's license can be suspend for a 6 to 12 months time period.

The concept of narcotic drugs :

Drug :

A natural or synthetic substance possessing therapeutic or prophylactic properties for diseases affecting humans Used for diagnostic purposes or for correcting dysfunction of certain organ functions ^[15] .

Cocaine:

Cocaine: On cocaine (in English: cocaine) by doctors in local anesthesia sometimes in surgical procedures, but theoretical occurs extracted from the leaves of the Coca plant ^[16].

Methamphetamine: Methamphetamine is characterized by bitter taste, and the appearance of crystals resembling glass or bluish-colored peels, which may be used in the form of powder or pills. It is noteworthy that it is similar in its chemical composition Amphetamine Amphetamine used in the treatment of deficiency

disorder Attention-Deficit Hyperactivity Disorder (ADHD), sleep disorders, and other health conditions ^[17] .

Diazepam

Diazepam (Valium) is a drug produced by Hoffman-La Roche, a benzodiazepine. It is often used to treat anxiety, insomnia, muscle aches, withdrawal symptoms of alcohol and many other situations such as endoscopic surgery to relieve tension and anxiety and surgical operations to stimulate femininity. The drug has properties of tension, against violence and cramping hypnotic, analgesic, muscle relaxant and forgotten ^[18].

Alprazolam :

Alprazolam belongs to the family of benzodiazepine, which has a soothing and hypothermic effect, associated with its own receptors in the brain, activating the action of gamma aminobutyric receptors that have a calming effect. Treatment may cause psychological and physical trauma; treatment is only treated as a specialist and is not recommended for long periods of time ^[19] .

Quetiapine :

Quetiapine : marketed as Seroquel among other names, is an atypical antipsychotic used for the treatment of schizophrenia, bipolar disorder, and major depressive disorder. It is also sometimes used as a sleep aid due to its sedating effect, but this use is not recommended ^[20] . It is taken by mouth ^[21,22] .

Olanzapine :

Olanzapine : Olanzapine (originally branded Zyprexa) is an antipsychotic medication used to treat schizophrenia and bipolar disorder. It is usually classed with the atypical antipsychotics, the newer generation of antipsychotics. It appears to have slightly greater effectiveness in treating schizophrenia (especially the negative symptoms) and a lower risk of causing movement disorders than typical antipsychotics. Olanzapine, however, has a higher risk of causing metabolic side effects like weight gain and type 2 diabetes than the typical antipsychotics ^[23, 24] .

Chlorpromazine HCl:

Chlorpromazine HCl: Chlorpromazine , marketed under the trade names Thorazine and Largactil among others, is an antipsychotic medication. It is primarily used to treat psychotic disorders such as schizophrenia. Other uses include the treatment of bipolar disorder, attention deficit hyperactivity disorder, nausea and vomiting, anxiety before surgery, and hiccups that do not improve following other measures. It can be given by mouth, by injection into a muscle, or into a vein ^[25] .

Detection periods :

The following chart gives approximate detection periods for each substance by test type. Drug test Medical diagnostics MeSH D015813 [edit on Wikidata] Detection periods The detection windows depend upon multiple factors: drug class, amount and frequency of use, metabolic rate, body mass, age, overall health, and urine pH. For ease of use, the detection times of metabolites have been incorporated into each parent drug. For example, heroin and cocaine can only be detected for a few hours after use, but their metabolites can be detected for several

days in urine. The chart depicts the longer detection times of the metabolites. Oral fluid or saliva testing results for the most part mimic that of blood. The only exceptions are THC (tetrahydrocannabinol) and benzodiazepines. Oral fluid will likely detect THC from ingestion up to a maximum period of 6–12 hours. This continues to cause difficulty in oral fluid detection of THC and benzodiazepines. Breath air for the most part mimics blood tests as well. Due to the very low levels of substances in the breath air, liquid chromatography—mass spectrometry has to be used to analyze the sample according to a recent publication wherein 12 analytes were investigated. Rapid oral fluid products are not approved for use in workplace drug testing programs and are not FDA cleared. Using rapid oral fluid drug tests in the workplace is prohibited in only: California Kansas Maine Minnesota New York Vermont K2, also known as synthetic cannabinoids, is detectable for up to 3 days after single use or up to 30 days for chronic users. It wasn't tested for in the past but is now detectable in modern tests [26,27 , 28] .

Approximate values for detection periods^[29]

Substance	Urine	Hair	Blood / Oral Fluid
Alcohol	6–24 hours[30] Note: Alcohol tests may measure ethyl glucuronide, which can stay in urine for up to 80 hours	p to 90 days	12 to 24 hours
Amphetamines (except methamphetamine)	1 to 3 days	up to 90 days	12 hours
Methamphetamine	3 to 5 days	up to 90 days	1 to 3 days
MDMA (Ecstasy)	3 to 4 days	up to 90 days	3 to 4 days
Barbiturates (except phenobarbital)	1 day	up to 90 days	1 to 2 days
Phenobarbital	2 to 3 weeks	up to 90 days	4 to 7 days
Benzodiazepines	Therapeutic use: up to 7 days. Chronic use (over one year): 4 to 6 weeks	up to 90 days	6 to 48 hours
Cannabis	Passive inhalation: up to 22 minutes** Infrequent users: 7- 10 Days; Heavy users:30 to 100 days;[31]	up to 90 days	2 to 3 days in blood, up to 2 weeks in blood of heavy users However, it depends on whether actual THC or THC metabolites are being tested for, the latter having a much longer detection

			time than the former. THC (found in marijuana) may only be detectable in saliva/oral fluid for 2 to 24 hours in most cases[31].
Cocaine	2 to 5 days (with exceptions for heavy users who can test positive up to 7–10 days, and individuals with certain kidney disorders)	up to 90 days	2 to 10 days
Codeine	2 to 3 days	p to 90 days	1 to 4 days
Cotinine (a breakdown product of nicotine)	2 to 4 days	p to 90 days	2 to 4 days
Morphine	2 to 4 days	p to 90 days	1 to 3 days

I am the drug.

Medicament Name	And the proportion of drug substance
Diazepam	10 mg / ml amp
Morphine	10 mg / ml amp
Lorazepam	2 mg / ml amp
Tramadol	100 mg / ml amp
Pethidine	50 mg / ml amp
Haloperidol	20 mg / ml amp
Alprazolam	3mg / ml amp
Midazolam	15 mg / ml amp
Amitriptyline	150 mg / ml amp

The results :

Addiction in general

Its end or fate Bad prognosis I mean, according to the will and determination of the patient and according to the friends (including bad friends) are the ones who teach others about these things) and the field and dialogue are open to this field because science is in constant development and I hope that I have come to you so I explained all of his knowledge and banner.

Practical Part

Practical Part:

The results :

After my visit to the hospital Diwaniyah educational and I continue to go every week to complete my research and I knew the disease and the medicine they are treated by their pharmacy. (Samples were taken from patients.

- A. 25-year-old man from Diwaniya history of the disease 7 years ago suffers from psychosis.
- B. 29 - year - old addiction to Tramadol came to and restores his previous life.
- C. 41 year addiction (Bdiazpam (Zolam
- D. the cosmic obsession
- E. Bipolar patient

As a result, the specialist doctor in the consultation said that in these cases, the drugs available to the patient within the dates and specific conditions for

each patient, A relapse of addiction) in this case we tend to the main hospital in Baghdad. (Ibn Rushd in the square of Andalusia, the Kurds) where there are private lobbies and addiction disease and are useful as they became the enemy of their reservation until the recovery is equal. But the general addiction (bad prognosis) because it is exposed to any position can not bear back to the previous situation

The young patient: suffers from psychosis, but the disease was noticed by his family because they start in our eastern community to be treated with these diseases also this young man showed signs of disease after being shocked by the death of a parent. Or that you have inherited those diseases are strong in the family if they are on both sides.

The treatment of modicateampule

- (qnetapin Tab 100mg)
- (Halopendol) serenase 200mg)
- (kemadrine prcg clidin) parKezol
- (benzo hexol),

But the latest treatment advised after taking the remaining treatment duration of five or seven days and then leaves and is intended to avoid the side effects of the first treatment, which causes convulsions and movement Persistent and other movements of the other but after the patient feels better, it remains on the last treatment and he believes in it.

The second patient is addicted to Benzo diazepene and one of his medications is xanax (Alprazoam)

Atiran (10 razepam)

It is also given to the patient who suffers from anxiety or from obstructive nervous system and sleep disorders as well as gives him any type of medication such as depression

Trgptezol (Amtrg ptilline tab)

Or Fluexedine and other medicines, and the problem is also that the patient relaxes on hypnotic drugs. We recommend that we take them for more than three weeks and the majority do not adhere to these words and remain their review for the purpose of access to a particular treatment and is forced to buy from the black market or from unknown sources because pharmacies General Pulse These drugs without plaque and seal the doctor.

And the other addict on Tramadol (opiod liKeaction) and also the beginning of the patient before he knows this treatment is prescribed for him in cases Is given by doctors as a pain reliever effectively (given either after a certain procedure, or if the patient is complaining of chronic pain such as SOFAN joints and return to the problem and that he can also get it from multiple sources as I mentioned earlier and last but not least that addiction is generally its end Or his fate is unknown (Bad prognosis), according to the will and determination of the patient and according to friends (including bad friends) are the ones who teach others about these things) and keep the field and dialogue open between the field because science is constantly evolving and I hope that I did not come to you but I explained all his knowledge and banner Thank you .

1) Addict with Valium **ampoule**

(Diazepam)

Medical uses :

Sid effect : **muscle Relaxant** .

Utilise : muscul convulsion .

Shape pharmalg : 10 mg ampoule contain emulsion or Intravenous
Diversión .

Dose and time treatment : 0.1 – 0.3 mg / kg 0.1 – 0.5 mg / kg

Diazepam has a number of uses including:

- ❖ Treatment of anxiety, panic attacks, and states of agitation.
- ❖ Treatment of neurovegetative symptoms associated with vertigo .

- ❖ Treatment of the symptoms of alcohol, opiate, and benzodiazepine withdrawal .
- ❖ Short-term treatment of insomnia .
- ❖ Treatment of tetanus, together with other measures of intensive treatment .

A

Cases	Love within a month
Diazepam	30 Love within a month

Weight	Dose	Emulsion 0-2 mg / ml
2.5 kg	0.1 mg / kg / hour	1.3 ml / hour
	0.3 mg / kg / hour	3.8 ml / hour
	0.5 mg / kg / hour	6.2 ml / hour
3 kg	0.1 mg / kg / hour	1.5 ml / hour
	0.3 mg / kg / hour	4.5 ml / hour
	0.5 mg / kg / hour	7.5 ml / hour
3.5 kg	0.1 mg / kg / hour	1.8 ml / hour

There are no result of the treatment

2) Addict with Zolam tab

(Alprazolam)

Medical uses:

1. Alprazolam is mostly used to treat anxiety disorders, panic disorders, and nausea due to chemotherapy.
2. Alprazolam may also be indicated for the treatment of generalized anxiety disorder, as well as for the treatment of anxiety conditions with comorbid depression.
3. Shape phamalg : preventuses hepatitis.

B

Cases	Love within a month
Alprazolam	30 Love within a month

- Panic Disorder
- Immediate – release
- 0.5 mg po q8hr : may increase q3 – 4 Days by ≤ 1 mg / day .
- Average dose : 5 -6 mg / day po
- May require up to 10 mg / day po divided q8 hr .
- Extended – release
- 0.5- 1 mg po q Day : may increase q3- 4 Days by ≤ 1 mg / day
- Average dose : 3-6 mg po qDay
- Anxiety Associated with Depression

- 1-4 mg / day po divided q8 hr
- Premenstrual syndrome (off – label)
- 0.25 mg po q6 -12 hr : initiate treatment on day 16-18 of menses (not exceed 3 -4 mg / day) : taper dose over 2-3 days once menses occurs .

Tablet : schedule Iv	Tablet extended – release : schedule Iv	Tablet orally disintegrating : schedule Iv
0.25 mg	0.5 mg	0.25 mg
0.5 mg	1mg	0.5 mg
1 mg	2mg	1mg
2 mg	3mg	

There are no result of the treatment

3) Addict with Larguctil Tab (chlorpromazine HCl)

Medical uses:

1. used to treat certain mental/mood disorders (such as schizophrenia, psychotic disorders, manic phase of bipolar disorder, severe behavioral problems in children).
2. Chlorpromazine helps you to think more clearly, feel less nervous, and take part in everyday life. It can reduce aggressive behavior and the desire to hurt yourself/others. It may also help to decrease hallucinations (hearing/seeing things that are not there).
3. Utilise : Used in the mood disorders.
4. Shape pharalg : 50 mg Tab contain DisKtle .
5. Prevent utrlise : heart disease .

D

Cases	Love within a month
chlorpromazine HCl	30 Love within a month

Dose and time treatment :

Weight	Dose	Tablet
2.5 kg	0.1 mg / kg / hour	2.3 ml / hour
	0.4 mg / kg / hour	2.5 ml / hour
3 kg	0.3 mg / kg / hour	3.5 ml / hour
	0.2 mg / kg / hour	3.8 ml / hour
3.5 kg	0.6 mg / kg / hour	2.2 ml / hour
	0.4 mg / kg / hour	2.5 ml / hour

There are no result of the treatment

Place : Hospital Generic

4) Addict with Kuetyapine (Quetiapine)

(400mg)

Common side effects: include sleepiness, constipation, weight gain, and dry mouth.

Other side effects :include low blood pressure with standing, seizures, prolonged erection, high blood sugar, and neuroleptic malignant syndrome elderly people with dementia its use increases the risk of death.

Use during the later part of pregnancy may result in a movement disorder in the baby for a period of time after birth.

Dosing forms and Strengths

Tablet , immediate release

- Day 1 : 50 mg / day po divided q 12hr
- Days 2-3 : Dose increased day in increments of 25 – 50 mg q 8- 12hr
- To 300 – 400 mg by day 4 : Further adjustments can be made in increments of 25 – 50 mg q 12hr at intervals ≥ 2 days .
- Dosage range : 150 – 750 mg / day

Tablet , extended release

- Day 1 : 300 mg / day po : subsequently , may be increased by up to
- 300 mg / day at intervals ≥ 1 day .
- Maintenance (monotherapy) : 400 – 800 mg / day .

Tablet , immediate release	Tablet , extended release
25 mg	50mg
50 mg	150mg
100mg	200mg
200mg	300mg
300mg	400mg
400mg	

There are no result of the treatment

5) Addict with Trytizol (amitriptyline)

Common side effects : include a dry mouth, trouble seeing, low blood pressure on standing, sleepiness, and constipation.

Use during breastfeeding:

appears to be relatively safe .

It should not be taken with MAO inhibitors or the medication cisapride. Amitriptyline may cause problems if taken during pregnancy.

Depression

Outpatient : 25 -50 mg po qHs initially : increase by 25 mg every 5- 7 days to 100 -200 mg / day (may divide doses throughout day or give at bedtime) : if needed , may increase to 300 mg / day.

- Inpatient : 100 -300 mg po qDay .
- Postherpetic Neuralgia (off – label)
- 65 – 100 mg po qDay for at least 3 weeks .
- Tablet : 10 mg , 25mg , 50mg , 75mg , 100mg , 150mg

There are no results of the treatment

6) Addict with Serenace (haloperidol)

Medical uses;

Haloperidol is used in the control of the symptoms of:

- Adjunctive treatment of alcohol and opioid withdrawal.
- Agitation and confusion associated with cerebral sclerosis.
- Alcohol-induced psychosis.

- Hallucinations in alcohol withdrawa.
- Hyperactive delirium (to control the agitation component of delirium).

Moderate disease 0.5 mg q8- 12 hr initially .

Severe disease , 3 -5 mg q8 – 12 hr initially; not to exceed 30 mg/ day .

Im lactate (prompt – acting)

2- 5 mg q4 -8 hr prn ; may require q 1hr in acute agitation ; not to exceed 20 mg / day.

Im decanoate (depot)

Initial : Im dose 10 -20 times daily po dose administered monthly ; not to exceed 100mg ; if conversion requires Initial . Dose > 100mg , administer in 2 injections (eg , 100mg initially , then remainder in 3-7 days) .

Maintenance : monthly dose 10 – 15 times daily .

LV (Off – label)

May be needed for ICU delirium ; use one haloperidol lactate for IV administration ; do not use haloperidol decanoate .

Tablet

0.5 mg , 1mg , 2mg , 5mg , 10mg , 20mg ,

Oral concentrate

2mg / mL

Injectable solution , lactate

5mg / mL

Injectable solution, decanoate

50mg / mL , 100mg /ML

There are no result of the treatment

7 - Addict with morphine (MORPHINE SULFATE)

Medical uses;

Morphine is used primarily to treat both acute and chronic severe pain. It is also used for pain due to myocardial infarction and for labor pains. Its duration of analgesia is about three to seven hours.

However, concerns exist that morphine may increase mortality in the setting of non ST elevation myocardial infarction. Morphine has also traditionally been used in the treatment of acute pulmonary edema . A 2006 review, though, found little evidence to support this practice. A 2016 Cochrane review concluded that morphine is effective in relieving cancer pain. Side-effects of nausea and constipation are rarely severe enough to warrant stopping treatment.

Tablet

2mg , 5mg , 10mg

Solution for injection 15 mg / ml

8 - Addict with Lorazepam (benzodiazepines)

Medical uses;

- This medicine is used to treat anxiety or nervous tension.
- This drug is used to treat sleep disorders.
- This drug is used to treat the symptoms of alcohol withdrawal.

- This medicine is used to treat panic or panic attacks.

Dose :

Oral or intravenous administration is given to adults. Adults are given 1-4 mg intravenously every 10-20 minutes in severe agitation cases, and every 2-6 hours later. It is also given orally 1-2 mg twice or three times a day or as recommended by the doctor. It can be given to children 0.02-0.08 mg / kg depending on age or as recommended by the doctor.

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