MINISTRY OF HEALTHCARE

OF THE REPUBLIC OF UZBEKISTAN

THE TASHKENT PHARMACEUTICAL INSTITUTE

LANGUAGES CHAIR

U.M.Yunusova, M.B.Umarova

"Confirm"

Vice-rector on the Educational affairs

of the Tashkent Pharmaceutical Institute

S.U.Aliyev _____

28th of March, 2017

DRUG ANNOTATIONS ON PRACTICAL ENGLISH

FOR STUDENTS OF MASTER DEGREE

Educational directions:

5A510501 - Pharmaceutical Chemistry and Pharmacognozy
5A510602 - Technology of Immunobiological and Microbiological Preparations
5A510603 - Industrial Technology of Drugs
5A320406 - Technology of Medicinal Forms and Preparations
5A510502 - Organization of Pharmaceutical Affairs and Administration

TASHKENT – 2017

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TMM is intended for the 2nd year students of Master degree in all directions for translating drug annotations on Practical English.

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INTRODUCTION

Suggested for your attention Teaching Methodical Manual is compiled in conformity with Standard Programme on Practical English and it meets up-to-date requirements of training specialists in Pharmacy.

The main goal of this TMM is acquiring knowledge in English as a mean of communication and it helps to acquire more information in specialty.

TMM is intended for the 2nd year students of Master degree in all directions. It consists of 12 texts for reading and resuming, Questioning, 22 drug annotations for translating. Every text for reading and resuming has its own vocabulary in the English-English variant.

Besides that TMM has Bibliography, References and Contents.

INTRODUCTION PART

PHARMACOLOGY PREFACE

Pharmacology is the study of the prescriber has full knowledge and understanding of their actions. Safe and effective administration of drugs must be based on comprehensive pharmacologic knowledge, which is extensive and at times complex. The best approach to mastering pharmacology is the prototype approach. For each category or group of drugs, a representative or prototype is selected. For example, the prototype β- adrenergic blocker is propranolol. Complete information regarding the prototype is learned; this provides extensive knowledge of the characteristics of all drugs in that group. The additional information to be learned is only those characteristics in which the other drugs in that group differ from the prototype. Using again the example of the β-adrenergic blockers, one would learn which blockers are β_1-selective, which are short acting, which have intrinsic activity, and so on. It is important to remember that pharmacology is constantly changing as new drugs are marketed, and new information on drugs is derived from their administration.

DRUG NAMES

Every drug is chemical substance and therefore has a name that describes exactly its molecular structure. Chemical names are rarely encountered in clinical pharmacology; their major importance is in the area of drug development and production. When a drug is ready for clinical testing, a generic or nonproprietary name is selected after discussion by committees or representative of the American medical Association (AMA), the Food and Drug Administration (FDA), the United States Pharmacopeial Convention, the World Health organization (WHO), and the commercial sponsor of the drug. Since 1961, the names finally selected have been known as United States Adopted names (USANs), and they are intended to provide the features of brevity, easy recall, and some syllable or stem that indicates the group to which the drug belongs. International recognition of USANs reduces the occasion for worldwide multiplicity of names. Proprietary or trademark names are the property of the commercial developer of the drug. Trademarked drugs must always be identified by their generic names also. In the United States, exclusive manufacturing and distributing rights may be held under patent for 17 years.

PHARMACOKINETICS

Pharmacokinetics describes the fate of a drug after it has been administered**.** Many factors influence absorption, distribution, biotransformation, and elimination of drugs. The onset, duration, and intensity of a drug's actions are modified by these interactions with physiologic and biochemical functions. The movement of a drug through the human body depends on its lipid solubility, which enables it to cross-biologic membranes with ease. Most drugs are, to some degree, lipid soluble. A solution of a drug that is a weak acid or a weak base contains both non-ionized (lipid-soluble) and ionized (water-soluble) molecules. Alterations in the pH of the solution change the ratio of non-ionized to ionized molecules. Alkalization enhances ionization of acids and reduces that of bases; acidification has the opposite influence.

Absorption refers to the entry of drug molecules into the circulatory system. Drugs administered for systemic effects must be transported from the site of administration to the site of action. Intravenous administration places the drug directly into the circulatory system. Bioavailability refers to the fraction of an administered drug dose that reaches the circulatory system and thus becomes available for distribution to sites of action.

Distribution occurs when drug molecules leave the circulatory system and enter body tissues in which sites of action, storage, or in-activation are located.

Biotransformation frequently accomplished by hepatic enzymes, involves the conversion of drugs to other substances. The actions of many lipid-soluble drugs are terminated by transformation to molecules that are less lipid soluble and therefore more readily excreted by the kidneys. Impairment of hepatic function (e.g. in elderly persons, in the presence of hepatic disease) reduces the effectiveness of biotransformation.

Induction or enhancement of hepatic enzyme activity increases the rate of drug metabolism. The final factor in pharmacokinetics is excretion, which removes drugs and their metabolites from the body. The kidneys accomplish most excretion, although some drugs are eliminated by the lungs, in perspiration, or by secretion into bile or feces. Some drugs that are carried by bile into the gastrointestinal tract are reabsorbed in the intestine. This enterohepatic circulation contributes to the prolonged action of drugs such as the neuroleptics and digitoxin. Water-soluble drugs can be filtered by the kidneys and excreted as unmetabolized molecules. Renal impairment can markedly prolong the plasma half-life of drugs eliminated by renal excretion.

DRUGS USED DURING PREGNANCY

Drugs administered during pregnancy gain access to the fetus through the placental circulation. Lipophilic drugs cross the placenta most readily, but almost any chronically administered drug can reach the fetus. Drugs exert a variety of adverse effects on the developing fetus, which, like the neonate, has little ability to inactivate these substances. During the first trimester, some drugs interfere with the early establishment of organs and systems, and at birth, the infant may have major anatomic malformations. Called teratogens, these drugs include the sedative thalidomide, several antineoplastic agents, and alcohol.

In later pregnancy, drugs can retard mental and physical development of the fetus, or they can produce effects identical to those observed in the mother. For example, β-adrenergic antagonists can markedly depress fetal or neonatal hemorrhage even if the mother's prothrombin time is within acceptable limits. Women who are physiologically dependent on drugs such as opiates and barbiturates during their pregnancy often give birth to an infant who exhibits signs of drug withdrawal during the first hours or days of life. Smoking cigarettes during pregnancy results in fetal damage and low birth weight. Drugs administered during labor and delivery (e.g. anesthetic and analgesic agents) can evoke respiratory depression the neonate.

Pregnancy must be considered a contraindication to the administration of all drugs. However, maternal diabetes, hypertension, convulsive disorders, or preeclampsia must be controlled for the safety of both mother and infant. Required drugs should be administered in the lowest possible doses and under close medical supervision. Breastfeeding is also a contraindication for drug administration, although there is controversy regarding which agents reach sufficient levels in breast milk to be harmful to the nursing infant.

DRUG INTERACTION

Drug administered concurrently or sequentially can enhance or diminish each other's actions. Some drug interactions are beneficial, as when the potassium- retaining effects of angiotensin-converting enzyme (ACE) inhibitors offset the potassium-losing effects of thiazides. Enhancement of two drugs, as when simultaneous administration of two drugs with anticholinergic efficacy produces severe suppression of the cholinergic nervous system. Potentiation is the marked intensification of drug's action by another, so that the combined affect is greater than the sum of the two drugs acting independently. For example, very small amount of

alcohol, combined with benzodiazepines, can produce CNS depression greater than anticipated severity.

Drug Interactions can be pharmacokinetic or pharmacodynamic. Pharmacokinetic interactions involve alterations in drug absorption, distribution, biotransformation, or excretion. Pharmacodynamic interactions usually occur at the site of drug action. Chemical or physical drug interactions can occur in vitro. Combining sodium bicarbonate and epinephrine in the same solution by several drugs in one syringe or infusion.

In addition to its interaction with CNS depressants, alcohol can react adversely with many other drugs. Severe vasodilatation and hypotension can occur if alcohol and antianginal nitrates are administered concurrently. Because of the widespread use of alcohol, patients should always be advised when its consumption may be hazardous. Drugs can also interact with components of foods. Wines, cheeses, and other food containing tyramine can provoke hypertensive emergencies in persons receiving monoamine oxidase inhibitors.

The incidence of undesirable drug interactions can be decreased by health care personnel who are familiar with the pharmacology and the recognized interactions of the drugs they administer. Patients can be given information regarding potential drug or food interaction.

ANTIBACTERIALS

Agents that suppress bacterial growth are among the most widely prescribed drugs in the world. Many of these are naturally occurring substances, synthesized by bacteria or fungi. Molecular modification of these natural antibiotics has yielded numerous semisynthetic substances, often with broader efficacy than the naturally occurring analogues. For example, penicillinase- resistant penicillin has increased the spectrum of activity of the parent drug, penicillin. Some antibacterial agents, such as sulfonamides, are synthetic anti-infectives.

The mechanism of action of the antibacterial drugs, as of all the antimicrobials, involves interference with some aspect of the physiologic function of the microorganism, such as suppression of cell wall or protein synthesis or alteration of cellular metabolism. Antibacterial activity ranged from bacteriostatic, which slows but does not irreversibly prevent bacterial growth, to bactericidal, which destroys microbes. Anti-infective drugs are most useful in persons with competent immune systems that assist in the removal of infectious agents.

Antibacterials vary widely in their spectrum of susceptible organisms. Some are active against a wide variety of pathogens, and others are effective against a limited number of microorganisms. Viruses are usually impervious to these agents, which are

appropriately administered to persons with viral infections only if secondary bacterial invasions are present. Body fluids for sensitivity testing should be obtained before drug therapy is begun.
Antibacterial activity may be enhanced by concomitant use of other types of drugs. For example, probenecid competes for renal tubular secretion, prolonging the plasma half-life of penicillin and cephalosporin. β-Lactamase inhibitors such as clavulanic acid broaden the antimicrobial spectrum of activity of agents that are destroyed by these enzymes.

ANESTHETICS

The basic mechanisms by which drugs depress the central nervous system (CNS) to produce general anesthesia are not clear. Theories based on alterations membrane permeability, depression of cellular respiration, or formation of crystal hydrates have been proposed to explain the effects of these agents, which represent he oil-water partition coefficients of anesthetics correlate with their ability to act or to reach their sites of action. The most potent anesthetics are those with the greatest lipid solubility. Agents that have low blood solubility but are highly lipophilic rapidly leave the circulatory system and cross the blood-brain barrier. Drugs with high capacity to remain in the vascular compartment require greater plasma concentrations to attain equilibrium and reach anesthetic levels in the CNS. However, there are many substances with comparable oil- water partition coefficients that do not induce general anesthesia.
The classic stages of anesthesia are most apparent when ether is used. Because this agent is very soluble in blood and body tissues, effective concentrations are slowly achieved in the CNS, and characteristic changes in levels of consciousness and involuntary activity are prominent. Although many general anesthetics produce a somewhat similar sequence of events, some stages are minimized.
Stage I, or inducting of anesthesia, begins with drug administration and ends when consciousness is lost.
Stage II, reduced with the use of many modern anesthetics, begins with loss of consciousness and is characterized by CNS excitation; rapid, possibly irregular respiration; dilated but reactive pupils; and delirium.
Stage III begins with the return of rhythmic respiration and is divided into deepening surgical anesthesia and muscular relaxation.

DRUGS AND MONEY

During recent decades, society has attached great importance to improved health, and has witnessed a fast reason demand for health care. Because of that development,

most, if not all, countries have found themselves confronted with the problem of meeting growing expenditure on health care. That additional expenditure must either be financed or it must in one way or another be constrained; both approaches will probably have to be adopted in parallel. Increased public spending may meet with macro- economic difficulties, while increased private spending will give rise to equity concerns. The growth and the ageing of populations, the widening range and complexity of available medical interventions and changes in society's expectations regarding attainable health and desirable health care all put pressure on the budget available for health systems, whether these comprise prevention, curative services or the provision of care for the aged or in firm.

The very rapid growth of expenditure on medicines is of particular concern and it has attracted considerable political attention, in part no doubt, because it is a concrete issue, which at first sight appears readily amenable to economic control. The first impression has often proven misleading; despite the impressive variety of cost containment measures, which have been devised over the years, drug expenditure has remained high and as a rule, it has continued to grow.

Health care systems are largely based on the principles of health as a human right, on equitable access to health and health services, quality of health care, on solidarity, and on the active participation of society as a whole. Because of the difficulties associated with rising costs, however, it is today vital to translate those ideals into achievements, which are quantifiable both in terms of health and of expenditure; only with the help of such exact information can one hope to develop defensible politics, which balance initiatives against resources.

Throughout the years, the World Health Organization has taken the position that the question as how to provide access to medicines while containing their costs must be viewed as an integral part of long-term pharmaceutical policies. More broadly, it is a part of overall health care policy and a component of the entire economic and social policy of a country. The problem of cost containment of pharmaceuticals cannot be viewed separately from such issues as equity, market structure or the quality of therapeutic care.

Causes of cost increases

The reasons why the overall costs of pharmaceutical care tend to rise continuously have been well summarized by the National Institute of Health Care Management. They are:

1. The replacement of older, cheaper medicines by newer, higher priced medicines.
2. Increases in the uses of medicines.
3. The introduction of new medicines for diseases for which hitherto no treatment (or at best a less effective treatment)
4. Increases in the price of existing medicines.

GERIATRIC PHARMACOLOGY

The elderly population (i.e. those older than 65 years of age) consume a disproportionately large percentage of the drugs sold annually in the US. Many elderly persons have multiple illnesses and are receiving several drugs simultaneously. This age group is at greater risk of experiencing adverse drug reactions and interactions.

Alterations in certain pharmacokinetic factors predispose elderly persons to greater responsiveness to drugs. Physiologic functions, such as hepatic and renal activity, become less efficient with age. Drugs that are hepatically biotransformed (e.g. sedatives, narcotic analgesics) and those that are inactivated by renal excretion can have prolonged and intensified action in the elderly. Changes in patterns of blood flow may delay absorption and distribution of drugs and can also hinder their delivery to the liver and kidney for inactivation. An increase in the proportion of adipose tissue enhances sequestration of lipid-soluble drugs in elderly persons. Dehydration, which commonly occurs as renal water-conserving efficacy is lost, results in higher plasma levels of drugs, particularly those that are water-soluble. In addition to such general factors, some physiologic changes in elderly persons have particular impact on certain types of drugs. For example, anticoagulants can be especially hazardous for several reasons. Elderly people have fragile skin and blood vessels and an increased risk of hemorrhage after injury. In addition, decreased hepatic function hinders the inactivation of these drugs and results in depletion of hepatically synthesized clotting factors as well as the plasma proteins to which these drugs avidly bind. Drugs that induce orthostatic hypotension can cause severe blood pressure fluctuations in elderly persons because of reduced vascular response to changes in position. Drug-induced hypotension is believed to be a major cause of falls in older people, who often have fragile bones that are easily fractured (osteoporosis). Alterations in receptor sensitivity may occur at advanced age; this change appears to underlie in part the increased responsiveness to benzodiazepines such as diazepam. Despite the physiologic changes that occur with age, many precautions can be taken to make drug administration safe and effective in elderly persons. Only those drugs that are necessary should be given. Initial prescriptions should be written for smaller than normal doses, and the patient should be observed carefully to determine whether dosage adjustments are needed. Information can be provided to patients about anticipated adverse effects, in particular those that can warn of impending drug toxicity and those that endanger personal safety. Attention can also be paid to possible drug interactions, especially those involving foods, alcohol, or OTC

preparations. If the patient's clinical condition deteriorates or new symptoms appear, the possibility that these affects are drug related must be considered.

PEDIATRIC PHARMACOLOGY

Very young persons respond to drugs differently than adults. Most drugs are not specifically studied for their safety and efficacy in children. Instead, retrospective observation provides a body of knowledge that skilled physicians can use to administer drugs appropriately to pediatric patients. Several mathematical formulas that are based on age, body weight, and surface area can be used to proportions may also be based on body weight (e.g. milligrams per kilogram of body weight) to provide for a child's smaller size.

Several physiologic factors can alter drug pharmacokinetics in children. Neonates, in particular those born prematurely, are most at risk of heightened drug effects. Their hepatic enzyme systems, needed to inactivate drugs, are immature. Suboptimal renal blood flow and function result in inefficient excretion of drugs and metabolites. The blood-brain barrier is not fully developed, allowing entry of water-soluble drugs into the central nervous system (CNS). Levels of plasma proteins are reduced, and they are frequently bound with endogenous substances such as bilirubin. The neonate has a higher body water volume and a lower proportion of adipose tissue than an older infant, which may alter distribution of drugs. Many substances are easily absorbed across the neonate's permeable skin. Differences in gastrointestinal pH, motility, and bacterial population can affect absorption of drugs after oral administration. Physiologic systems gradually attain the maturity found in adults. However, development occurs at varying rates, and drug responses may be quite different among children of the same age and size. Close observation and careful adjustment of doses can help to make pediatric drug administration safe and effective.

PHARMACEUTICAL CARE

Pharmaceutical care is defined as the responsible provision of drug therapy for achieving definite outcomes that improve a patient's quality of life. These outcomes are: (1) cure a disease, (2) elimination or reduction of a patient's symptomatology, (3) arrest or slowing of a disease process, or (4) prevention of a disease or symptomatology. Pharmaceutical Care involves designing, implementing, and monitoring a therapeutic plan that the pharmacist believes will optimally produce the therapeutic objective. Implementing and monitoring require the pharmacist to

identify, resolve, and prevent drug – related problems arising from under treatment, overtreatment, and inappropriate treatment. Pharmaceutical care should be carried out in cooperation with physicians and patients, but it is provided for the direct benefit of patients. Pharmacists accept direct responsibility for any aspect of care that they could have affected.

Pharmacists already have sufficient educational preparation and legal authority to carry out this mandate in partnership with physicians and patients. It is time for each pharmacist, to decide whether to accept this mandate, and whether or not to adopt pharmaceutical care as a professional mission. There are limits, however, to what individuals can accomplish alone. Therefore, it is also time for pharmaceutical organizations, educational institutions, and patient care corporations to decide whether they want to be port of the problem of drug-related morbidity or part of the solution. If we can turn from self-examination toward public responsibility, we can proceed to professional maturity.

Pharmacists cannot wait for any other pharmacy organization to implement pharmaceutical care. Pharmaceutical care has been, and will be implemented by individual practitioners who change their sense of professional purpose. Pharmacy organizations can do much to facilitate the process, but can do little unless individual members initiate practice. Once a pharmacist has accepted a new purpose and new responsibility, he must consider what is involved in changing his practice. Some questions that he must ask are personal, some are organizational. They involve the pharmacist, the patient, and other professionals, especially physicians, employers (pharmacies, hospitals, corporations, etc.), and professional associations.

ADMINISTRATIVE, SUPERVISORY, AND MANAGERIAL FUNCTIONS

Most modern pharmacists are involved to some degree in administration. Even the employed practicing pharmacist with no direct managerial responsibility has administrative duties related to practice. These include proper prescription record keeping, pricing procedures, maintaining patient drug histories, and so on. With proper planning such tasks, along with others such as inventory control, personnel scheduling, and payroll, may be delegated to clerks, but a supervisory responsibility remains. In recent years, the growth of third-party programs, with their attendant paperwork, has greatly increased the administrative chores of pharmacists.

Because most pharmacy practices are relatively small, that is, involve only a few pharmacists, a large proportion of pharmacists are involved in the management of a prescription department of practice. In community pharmacies, pharmacists usually manage the entire operation, either because they have an ownership interest in it or because they are the most educated employees.

In any event, it is not uncommon for pharmacists to be thrust into the position of managing a business operation, a set of functions for which they are not very well prepared. The importance of these functions should not be underestimated. If the goal of management is the efficient operation of practice, it is congruent with the best interests of the pharmacy's patients. However, the goal become profit maximization, either explicitly or implicitly, it may come into direct conflict with patient needs take precedence as managers, depending on the criteria used. In fact, for optimal professional practice, managerial policy related to practice must be determined by pharmacists.

The problem of managing a practice is shared with most other professions, including medicine, law, and dentistry, it is perhaps more apparent in pharmacy because the usual commercial setting of pharmacy makes it more salient. Excessive or predominant concern with managerial functions may divert pharmacists from mainline professional functions. While this is not necessarily bad, it should be done self-consciously so that its consequences, such as failure to keep up with the pharmacy field, may be assessed.

QUESTIONING

PHARMACOLOGY PREFACE

1. What is Pharmacology?
2. What must safe and effective administration of drugs based on?
3. What is the prototype approach?
4. What is propranolol?
5. What does prototype learning provide?
6. What is β_1-selective adrenergic blocker?
7. What is important to remember?

DRUG NAMES

1. What does a name of a drug describe?
2. Where are chemical names encountered?

3. How is a generic or nonproprietary name selected?
4. What are the names intended to?
5. What does they indicate?
6. What does the International recognition of USANs reduce?
7. What are proprietary or trademark names?
8. What must trademarked drugs be?
9. How many years may exclusive manufacturing and distributing rights be held under patent?

PHARMACOKINETICS

1. What does Pharmacokinetics describe?
2. What does the movement of a drug through the human body depend on?
3. What are non-ionized molecules?
4. What are ionized molecules?
5. What do alterations in the pH of the solution change?
6. What does alkalization enhance?
7. What does absorption refer?
8. How does distribution occur?
9. What does biotransformation involve?
10. What does induction increase?
11. What is the final factor of Pharmacokinetics?
12. Where are any drugs reabsorbed?
13. What does this enterohepatic circulation contribute to?
14. How can water-soluble drugs be filtered and excreted?

DRUGS USED DURING PREGNANCY

1. What do drugs administered during pregnancy gain?
2. What do drugs exert?
3. Why is the first trimester of pregnancy important?
4. What can drugs do in later pregnancy?
5. What women give birth to an infant any failures?
6. What can smoking cigarettes result during pregnancy?
7. What results can occur, if a pregnant woman takes drugs during labour and delivery?
8. What diseases require controlling safety of both mother and infant during pregnancy?

9. How should required drugs be administered?
10. What drugs may be administered during breastfeeding?

DRUG INTERACTION

1. What drugs can enhance or diminish each other's actions?
2. Spell and explain ACE inhibitors.
3. What can produce severe suppression of the cholinergic nervous system?
4. Explain what Potentiation means.
5. Give examples for potentiation.
6. What drug interactions do you know?
7. What are Pharmacokinetic interactions?
8. What are Pharmacodynamic interactions?
9. How can chemical or physical drug interactions occur?
10. How can alcohol and antianginal nitrates react?
11. What should patients be advised?
12. What foods can contain tyramine?
13. What can tyramine provoke?
14. Who can decrease undesirable drug interactions?

ANTIBACTERIALS

1. What drugs are most widely prescribed in the world?
2. How are they synthesized?
3. How do these natural antibiotics yield?
4. What natural antibiotics do you know?
5. What synthetic antibiotics do you know?
6. Explain the mechanism of action of the antimicrobial drugs.
7. How do antibacterials act?
8. How may antibacterial activity be enhanced?
9. Give examples.

ANESTHETICS

1. Spell what CNS means.
2. What are theories based on?
3. How can they be proposed?

4. What are the most potent anesthetics?
5. What do drugs with high capacity require?
6. What happens when is ether used?
7. What characteristics do anesthetics have?
8. What do many general anesthetics produce?
9. Explain Stage I.
10. Explain Stage II.
11. Explain Stage III.

DRUGS AND MONEY

1. What problems do most countries have?
2. What difficulties do public spending meet?
3. What pressure does the budget have?
4. Name branches for healthcare system budget.
5. What is the reason of the very rapid growth on medicines?
6. What are healthcare systems based on?
7. What are the difficulties associated with?
8. How can you hope to develop defensible politics?
9. What is the position of WHO?
10. Name causes of cost increases.

GERIATRIC PHARMACOLOGY

1. How old are elderly people?
2. What is a percentage of the drugs sell annually in the USA?
3. What risks does this age group have?
4. How do drugs act in the elderly?
5. What changes are there in patterns of blood flow?
6. How can dehydration occur?
7. What peculiarities do elderly people have?
8. What other side effects do elderly people have?
9. How is fragile bone disease called?
10. What precautions can be taken to make drug administration?

PEDIATRIC PHARMACOLOGY

1. How do young persons respond to drugs?

2. Why are drugs not specifically studied?
3. How can physicians use to administer drugs?
4. What must they take into consideration?
5. What physiological factors can alter drug pharmacokinetics in children?
6. What is a reason of altering distribution of drugs?
7. What peculiarities do children have?
8. What reasons can affect absorption of drugs after oral administration?
9. What development differences may be among children of the same age and size?
10. What measures can help to make pediatric drug administration safe?

PHARMACEUTICAL CARE

1. How is pharmaceutical care defined?
2. How many outcomes are there and what are they?
3. What does pharmaceutical care involve?
4. What do implementing and monitoring require the pharmacist?
5. What should pharmaceutical care be carried out?
6. What do pharmacists have?
7. What must pharmaceutical organizations and patient care corporations decide?
8. How will pharmaceutical care be implemented?
9. What questions does a pharmacist have?
10. What persons are involved with these questions?

ADMINISTRATIVE, SUPERVISORY, AND MANAGERIAL FUNCTIONS

1. What are modern pharmacists involved?
2. What duties does a practicing pharmacist have?
3. What any other tasks does a pharmacist have?
4. What do pharmacists usually manage?
5. What is the importance of these functions?
6. What may the goal come into?
7. What must managerial policy related to practice be determined?
8. What is the problem of managing a practice shared?
9. What may excessive or predominant concern divert pharmacists?
10. What should it be done?

MAIN PART

1. NAPHCON-A

Eye drops, solution

Qualitative and quantitative composition

Pheniramine maleate 3.0 mg - naphazoline hydrochloride 0.25 mg

Pharmaceutical form

Eye drops, solution.

Therapeutic indications:

Symptomatic treatment of eye irritations or ocular congestion caused by allergic disorders of the eye.

Posology and method of administration:

Instill1 or 2 drops into each eye every 3 to 4 hours or less frequently, until symptoms clear up. Do not continue treatment beyond the symptomatic period.

Contraindications

Hypersensitivity to one of the constituents of this preparation.

Do not use in patients with closed-angle glaucoma, patients predisposed to closed angle glaucoma, or infants and young children.

Special warnings and precautions for use

Use in infants and children may result in depression of the central nervous system, leading to coma and a significant fall in body temperature.

Use with caution in elderly patients with severe cardiovascular disease, including cardiac arrhythmia, patients with poorly controlled hypertension; diabetics, especially those with a tendency to diabetic ketoacidosis.

Interaction with other medicinal products

Interactions are possible in patients undergoing treatment with monoamine-oxidase inhibitors.

Pregnancy and lactation. The effects of naphozaline on animal reproduction have not yet been studied and it is not known whether administration to a pregnant woman can be harmful to the fetus and affect the reproductive function. It is not known whether the drug is excreted in human milk. The product should only be given to a pregnant and lactating woman if clearly needed.

Side effects

Ocular effects occasionally associated with use of the product include: eye pain, changes in vision, local irritation and continued redness. Local allergic reactions rarely occur. Systemic effects such as headache, nausea, dizziness, cardiopathy, hypertension and hyperglycemia may occur. In case of over dosage, antihistamines can cause, besides pronounced anticholinergic effects and depression, a stimulation of the central nervous system, especially in the child.

Pharmacodynamic properties

Pharmacotherapeutic group: decongestants and antiallergics– sympathomimetics used as decongestants.
Naphazoline is a sympathomimetic with substantial alpha-adrenergic activity. It is a vasoconstrictor with a fast and long- lasting activity, reducing edema and congestion when applied to the mucosa. Through its local adrenergic activity, naphazoline has a vasoconstructive effect on the blood vessels, thereby causing a decongestion of the conjunctiva.

Pharmacokinetic properties

Repeated and/or prolonged instillation could give cause to a considerable systemic absorption of naphazoline.

Shelf life

Unopened: 36 months. Discard four weeks after first opening of the bottle.

Special precautions for storage

Store at room temperature (15°-25°C). Protect from light and excessive heat. Keep bottle tightly closed when not in use. Keep out of reach of children.

NOTES

1. p**osology**- the part of medicine concerned with dosage
2. **irritations**- a feeling of annoyance
3. **fetus**- an unborn offspring of a mammal, in particular an unborn human baby more than eight weeks after conception
4. **vasoconstrictor**- a drug, agent, or nerve that causes narrowing (vasoconstriction) of the walls of blood vessels
5. **shelf life**- the length of time to sell or use of a product

2. AMPICILLIN 500 mg (1000 mg)
Powder for Injection

Composition

One vial contains: Ampicillin Sodium equivalent to
Ampicillin 500 mg or 1000 mg

Indications

Acute and chronic bacterial infections of various localization and severity caused by ampicillin-susceptible microorganisms like bacterial meningitis, endocarditis, especially ear/nose/throat- infections; infections of the respiratory tract including whooping-cough; infections of the genital-urinary tract; infections of the gastro-intestinal tract; infections of the skin and soft parts; ophthalmological infections.

Contraindications

Because of the risk of experiencing an allergic shock, ampicillin must not be administered to patients with proven hypersensitivity to any penicillin. There exists a higher risk of hypersensitivity reactions in patients with an allergic tendency.

Special caution is also required in patients suffering from virus diseases.
Ampicillin may be given during pregnancy and lactation if indicated.

Adverse effects

Nausea, vomiting, loose stool or diarrhea are common. These symptoms will usually subside during treatment, or soon after cessation of ampicillin administration.
The occurrence of severe, persisting diarrhea during or in the first weeks after ampicillin treatment can be a sign of pseudomembranous enterocolitis, which may be life-threatening. Skin and skin appendages, exanthema and inflammation of the mucous membranes, in particular in the area of the mouth, can occur.
Certain fungi and penicillin may have identical antigens. Therefore, patients with a history of or acute fungal cutaneous infections may experience hypersensitivity reactions to ampicillin already during the first treatment with the antibiotic.

Interactions

Ampicillin should not be given in combination with bacteriostatic chemotherapeutics or antibiotics (e.g. tetracycline, erythromycin, sulfonamides or chloramphenicol), as this might lead to reduced therapeutic effects. This brings about an increased and prolonged ampicillin level of the serum and of the bile.

Dosage instruction

Adults, adolescents and children above 6 years receive 1.5 - 6 g ampicillin daily divided into 2 - 4 single doses. The daily dosage can be increased up to 15 g and more.
Children below 6 years are given100 mg ampicillin/kg body weight divided into 2 - 4 single doses. In case of meningitis, a daily dose of 200 - 400 mg ampicillin/kg body weight is recommended.

Special dosages

In cases of severe renal insufficiency, a dose of 1 g ampicillin within 8 hours should not be exceeded. The serum concentration of ampicillin in pregnant women can be reduced by up to 50 %.
In general, ampicillin should be taken for 7 -10days, but the therapy should be continued for at least 2 - 3 days after the symptoms of the acute infection have subsided.

Keep medicines out of reach of children!

Shelf life

3years

NOTES

1. **susceptible**– sensitive
2. **suffer** – feel pain or sadness
3. **loose stool** – constipation
4. **cessation**- ceasing
5. **persisting** – continuous
6. **life-threatening** – dangerous

7. **cutaneous** – skin
8. **adolescent**- teenager
9. **subside** – disappear

3. CEFAZOLIN SODIUM
0.5 g and 1.0 g

Composition:
Each Cefazolin0,5g Injection vial contains: Cefazolin sodium equivalent to 500 mg Cefazolin. Each Cefazolin1 g Injection vial contains: Cefazolin sodium equivalent to 1 g Cefazolin. Cefazolin (cefazolin sodium) is a semi-synthetic cephalosporin for parenteral administration. Sugar free.

Indications:
Cefazolinis indicated in the treatment of the following infections due to susceptible microorganisms:
Respiratory tract infections due to S.*pneumoniae,* Klebsiella species, *H. influenzae, S. aureus* (including penicillinase strains) and group A B-hemolytic streptococci. The agent of choice for streptococcal infection and prevention of rheumatic fever is penicillin.
Pre-operative prophylaxis: The prophylactic administration of Cefazolin pre-operatively, intra-operatively and postoperatively may reduce the incidence of post-operative wound infections in patients undergoing abdominal hysterectomy. The prophylactic administration of Cefazolin should be discontinued within a 24-hour period after the surgical procedure.

Side effects and special precautions
Hypersensitivity, drug fever, skin rash, vulvar pruritic eosinophilia, reactions resembling serum sickness and anaphylaxis have occurred. Neutropenia, and thrombocytopenia less frequently occurs. Increased levels of urea may occur, and are not always associated with clinical evidence of renal impairment. Interstitial nephritis and other renal disorders have been reported. Hepatitis and cholestatic jaundice have been reported. Nausea and vomiting, anorexia, confusion, stupor, headache, diarrhea and oral candidiasis have been reported.

Contraindication
Cefazolin is contraindicated in patients with a known allergy to cephalosporin group of antibiotics. Pregnancy and lactation, as safely has not been established.

Warnings
Before Cefozalin therapy is instituted, careful inquiry should be made concerning previous hypersensitivity reactions to cephalosporin and penicillin. Cephazolin derivatives should be administered with caution to penicillin sensitive patients.

Dosage and directions for use:
Cefazolin may be administered after reconstitution by deep intramuscular injection or by slow intravenous injections over 3 or 5 minutes or by intravenous infusion.

Reconstitute with sterile water for injection, bacteriostatic water for injection or 0.9 % sodium chloride injection, according to table. Shake well until dissolved. Cefazolin should be injected into a large muscle mass.

Storage instructions:

Store dry powder at 15 to 25^0 C.

NOTES

1. **a hysterectomy** - a surgical operation to remove a woman's womb
2. **vulva**-the female external genitals (vulvar –adjective)
3. **interstitial**- forming or occupying interstices
4. **stupor**- a state of near-unconsciousness or insensibility

4. DRICLOR

Solution

User information leaflet

Everyone perspires to some extent, especially when it is hot, but some people perspire and become wet and sticky, even in normal conditions.

Excess sweating, can cause embarrassment and stress which only serves to worsen the condition. Driclor Solution has been specifically formulated to treat excessive perspiration. It works by forming a gel matrix in the affected sweat glands, which reduces and eventually stops the flow of sweat.

Excess sweat is reabsorbed into the body and disposed of in the normal way. Within just a few weeks of use, excessive perspiration should disappear and suffers should feel cool and dry. Driclor is suitable for use on all skin types and by anyone for whom traditional anti-perspirants are inadequate.

Ingredients

Alcohol, aluminum chloride, aqua.

Warnings

If you are allergic to any of ingredients, you should not use Driclor.

Driclor can cause temporary stinging and irritation in some people. If this troubles you, stop using the product for a while to see if this helps. If it does not help or stinging is severe, stop using the product and ask your pharmacist for advice. It is important to follow the directions for use carefully.

Instructions – how to assemble Driclor solution

1. Place bottle on flat surface, carefully unscrew cap on bottle and dispose.
2. Place roller ball unit into neck of bottle and gently push down.
3. Screw on the larger cap firmly to secure roller ball unit.

Directions for use – important

•Always dry the affected areas thoroughly before applying Driclor, otherwise irritation may occur.

•Initially apply Driclor once daily, last thing at night when the sweat glands are least active.

•In the morning wash Driclor off and continue to use your regular deodorant as normal.
•After 1-2 weeks you should notice a considerable improvement. Once sweating stops during the day you can reduce applications as required.
•Do not apply Driclor to broken, sensitive, irritated or recently shaven skin. Avoid contact with the eyes.
•Driclor can stain clothes so take care to let it dry fully before putting on nightclothes.
•Do not allow Driclor to come into contract with jewelry or polished metal surfaces (can cause discoloration).
•Store Diclor upright in a cool place below 25°C.
For external use only

NOTES

1**. perspire**- give out sweat through the pores of the skin as a result of heat, physical exertion, or stress
2. **Embarrassment**- a feeling of self-consciousness, shame, or awkwardness
3. **Gland**-an organ in the body which produces particular chemical substances
4. **Gentle**- mild and kind (Gently –adverb)
5. **Screw** -a short, slender, sharp-pointed metal pin with a raised helical thread running around it and a slotted head, used to join things together by being rotated and pressed it.
6. **stain**- mark or discolour with something that is not easily removed
7. **jewelry**- personal ornaments, such as necklaces, rings, or bracelets

5. PATANOL

Olopatadine hydrochloride 0, 1 % Eye Drops, Solution

Description

PATANOL Eye Drops, Solution, are supplied as a sterile aqueous solution containing olopatadine, a relatively selective H_1 - receptor antagonist and inhibitor of histamine release from the mast cell for topical administration to the eyes.

Contains

Each ml of PATANOL Eye Drops, Solution contains:
Active: 1.11 mg olopatadine hydrochloride equivalent to 1 mg olopatadine.
Preservative: benzalkonium chloride 0.01%.
Inactives: disodium phosphate dodecahydrate, sodium chloride, concentrated hydrochloric acid/sodium hydroxide (adjust pH); and purified water.

Clinical Pharmacology

Olopatadine is a multiple- action molecule: an inhibitor of the release of histamine from the mast cell and relatively selective histamine H_1-antagonist that inhibits the in

vivo and in vitro type 1 immediate hypersensitivity reaction including inhibition of histamine induced effects on human conjunctive epithelial cells and an inhibitor of cytokine secretion.

Results from conjunctive antigen challenge studies demonstrated that PATANOL when subjects were challenged with antigen both initially and up to 8 hours after dosing, was significantly more effective than its vehicle in preventing ocular itching associated with allergic conjunctivitis. Results from an environmental study demonstrated that PATANOL was effective in the treatment of the signs and symptoms of allergic conjunctivitis when dosed twice daily for up to 6 weeks.

Indications and usage

PATANOL Eye Drops, Solution is indicated for the treatment of the signs and symptoms of allergic conjunctivitis.

Dosage and administration

The recommended dose is one drop in each affected eye two times per day.

Adverse Reactions

The following adverse experiences have been reported in less than 5% of patients: asthenia, blurred vision, burning or stinging, cold syndrome, dry eye, foreign body sensation, hyperemia, hypersensitivity, keratitis, lid edema, nausea, and taste perversion. Some of these events were similar to the underlying disease being studied.

Contraindications

Hypersensitivity to any component of this product.

Warnings

Patients should be instructed not to instill PATANOL (olopatadine hydrochloride 0,1%) eye drops, solution while wearing contact lenses. For topical use only. Not for injection.

Precautions

•Do not use if tamper evident seal is damaged or broken at time of purchase.

•Store at 4°C to 30°C.

•To prevent contaminating the dropper tip and solution, care should be taken not to touch the eyelids or surrounding areas with the dropper tip of the bottle.

•Keep bottle tightly closed when not in use.

•Keep out of the reach and sight of children.

•Discard four weeks after first opening.

•**Caution**

Pregnancy. Olopatadine was found not to be teratogenic in rats and rabbits. There are, however, no adequate and well controlled studies in pregnant women. Because animal studies are not always predictive of human responses, this drug should be used in pregnant women only if the potential benefit to the mother justifies the potential risk to the embryo or fetus.

Pediatric use

Safety and effectiveness in pediatric patients below the age of 3 years have not been established.

How supplied
PATANOL is supplied as follows: 5 ml in plastic DROPTAINER dispensers.

NOTES

1. **Aqueous**- of or containing water
2. **Challenge**- exposure of the immune system to pathogenic organisms or antigens
3. **Perversion**- perversity , distortion
4. **Tamper**- interfere with (something) in order to cause damage or make unauthorized alterations
5. **Contaminate**- make (something) impure by exposure to or addition of a poisonous or polluting substance
6. **Justifies**- be a good reason for

6. TEARS NATURAL®
LUBRICANT EYE DROPS

More natural relief for dry, sensitive eyes.
Dry eye symptoms can be successfully treated with TEARS NATURALE II Lubricant Eye Drops, which replaces needed tear components to soothe irritated eyes.
Its advanced formula works more naturally.
TEARS NATURAL II contains just the right amount of wetting agent and other key s and combines with your own natural tears for gentler, more complete relief.
TEARS NATURAL II Lubricant Eye Drops is the only lubricant eye drop preserved with safe, non-sensitizing POLYQUAD 0.0011%. In vitro studies have shown that POLYQUAD substantially avoids the damaging effects of epithelial cell toxicity possible with other tear substitute preservatives and permits epithelial cell growth. POLYQUAD has been shown to be 99% reaction-free in normal subjects and 97% reaction-free in subjects known to be preservative sensitive.
With its unique formulation and with its neutral pH, low viscosity, and isotonicity, TEARS NATURAL II provides you with comfort and prompt, long lasting relief of dry eyes.
Sterile – For Topical Eye Use Only.
Ingredients
Each ml contains:
Active: DUASORB ™, a water soluble polymeric system containing dextran 70 0,1% and hypromellose 0,3%
Preservative: POLYQUAD ®(polyquaterinium-1) 0,0011%.
Inactives: borax, potassium chloride, sodium chloride, hydrochloric acid and/or sodium hydroxide to adjust pH, purified water.

Indications

For the temporary relief of burning and irritation due to dryness of the eye and for use as a protectant against further irritation. For the temporary relief of discomfort due to minor irritation of the eye or to exposure to wind or sun.

Directions

Instill 1 or 2 drops in the affected eye(s) as needed.

Warnings

If you experience eye pain, changes in vision, continued redness or irritation of the eye, or if the condition worsens or persists for more than 72 hours, discontinue use and consult a doctor. If solution changes color or becomes cloudy, do not use.

To avoid contamination, do not touch tip of container to any surface. Replace cap after using. Keep this and all drugs out of the reach of children. In case of accidental ingestion, seek professional assistance or contact a Poison Control Center immediately. Discard one month after opening.

How supplied

15 ml in DROP-TAINER® Dispensers

Storage

Do not store above 30°C.

Three easy steps to use TEARS NATURAL® Lubricant Eye Drops.

1. Tilt your head back.
2. Place a finger under your eye, and gently pull down until a “V” pocket is formed between your eye and lower lid.
3. Squeeze one or two drops in the “V” pocket. Try to avoid touching your eye with the dropper tip.

NOTES

1. **Lubricant**- a substance which you put on the surfaces or parts of something, especially something mechanical, to make the parts move smoothly.
2. **Gentle**- moderate in action, effect, or degree; not strong or violent
3. **viscosity** - the state of being thick, sticky, and semifluid in consistency, due to internal friction
4. **exposure**- the state of having no protection from something harmful
5. **Discard**- get rid of (someone or something) as no longer useful or desirable
6. **Tilt**- move or cause to move into a sloping position
7. **Squeeze**- firmly press (something soft or yielding), typically with one's fingers

7. ZENTEL ™

Albendazole

Qualitative and quantitative composition

Tablet containing either 200 mg or 400 mg albendazole
4 % w/v suspension to be taken orally; 4 galbendzole.per 100 ml.
2 % w/v suspension to be taken orally; 2 galbendazole per 100 ml.

Pharmaceutical form

Tablet
Suspension

Indications

ZENTEL is a benzimidazolecarbamate with antihelmintic and antiprotozoal activity against the following intestinal and tissue parasites: Round-worm (Ascarislumbricoides), pin-worm (Enterobiusvermicularis), hook-worm (Necatoramericanus, Ancylostomaduodenale), whip-worm (Trichuristrichiura), tape-worm (Taeniaspp and Hymenolepisonly in the case of associated parasitism) and cutaneous larva migrants; Giardiasis (G.lamblia, G.duodenalis, Lambliaintestinalis) in children.

Dosage and administration

The tablets can be chewed or taken with water. Some people, particularly young children, may experience difficulties swallowing the tablets whole and should be encouraged to chew the tablets with a little water, alternatively the tablets may be crushed.

Warnings and Precautions

In order to avoid administering ZENTELduring early pregnancy, women of childbearing age should initiate treatment during the first week of menstruation or after a negative pregnancy test. It may increase the risk of jaundice in newborn babies.

Interactions

Praziquantel has been reported to increase the plasma levels of the albendazole active metabolite.Albedazole should not be administered during pregnancy or in women thought to be pregnant. Zentel should not be used during lactation unless potential benefits are considered to outweigh the potential risks associated with treatment.

Effects on Ability to Drive and Use Machines

Adverse effects on the ability to drive or operate machinery have not been observed.

Adverse Reactions

Hypersensitivity reactions including rash, pruritus and urticaria. Headache and dizziness, epigastric or abdominal pain, nausea, vomiting and diarrhea. Elevations of hepatic enzymes. Erythema multiform, Stevens-Johnson syndrome

Special Precautions for Storage

Store below 30°C and protect from direct sunlight.

How supplied:

Tablets: Blister packs, polypropylene containers and cap.
Suspensions: Glass/plastic bottle with aluminum cap.
Shake well before use.

NOTES

1. **Crush**- deform, pulverize, or force inwards by compressing forcefully
2. **childbearing** - the process of giving birth to children
3. **jaundice**- an illness that makes your skin and eyes become yellow
4. **urticaria**- a rash of round, red welts on the skin that itch intensely, sometimes with dangerous swelling, caused by an allergic reaction, typically to specific foods
5. **Shake**- move (an object) up and down or from side to side with rapid, forceful, jerky movements

8. ANASEP GEL

Composition

Each gram contains: Metronidazole Benzoate10mg
ChlorhexidineGluconate Solution 0.25%

Indications

Anasep Gel is used for the treatment and prophylactics of infectious diseases of mouth as: Gingivitis, ulcerative gingivitis, gingival edema, periodontitis, stomatitis, pulpitis, post extractive alveolitis, toothache of infectious character.

Description

Anasep Gel for gum is antimicrobial drug for the combined treatment and prophylaxis of some infectious and inflammatory symptoms of orthodontic diseases. The effectiveness of the drug is carried out due to the active component Metronidazole. It has antiprotozoal and antibacterial effects against anaerobic bacteria, which cause periodontitis and gingivitis.

Contraindications

Hypersensitivity to Metronidazole and other contents of the product.

Side effects

After topical application of Anasep gel there is no risk of systematic side effects. However such side effects like metal taste in mouth, cavity, headache and allergic reactions (skin rash, itching, uriticaria) may occur occasionally. Symptoms of side effects (if any) should subside after discontinuing medicine. If symptoms persist, please consult doctor.

Precautions

Avoid gel contact with the eyes. During pregnancy and lactation the drug is not recommended unless directed by the Doctor. Check the expiry on the pack and do not use after expiry date of medicine.

Dosage

After cleaning teeth, properly rinse the mouth cavity and apply small quantity of gel on the toothbrush or on finger and rub on the gums and interdental parts. Upto 30 minutes, post application the patient should not eat or rinse mouth cavity. Anasep gel is applied on the gums 2 times a day. The course of treatment on average is 7-10 days. Prophylactic courses of treatment can be taken 1-2 times a year.

Storage

Keep in cool and dark place. Keep out of reach of children.

Presentation

Anasep Gel is available in 20 g tube.

NOTES

1. **Periodontitis**- inflammation of the tissue around the teeth
2. **Gingivitis**- inflammation of the gums
3. **Cavity**- a hole in a tooth, caused by decay
4. **Itch**- an uncomfortable sensation on the skin that causes a desire to scratch

9. CEFOTAXIME (CLAFORAN)

Dosage and administration

Adults: Dosage and route of administration should be determined by susceptibility of the causative organisms, severity of the infection, and the condition of the patient (see table for dosage guideline). CLAFORAN may be administered IM or IV after reconstitution. The maximum daily dosage should not exceed 12 grams.

If C. trachomatis is a suspected pathogen, appropriate anti-chlamydial coverage should be added, because cefotaxime sodium has no activity against this organism.
To prevent postoperative infection in contaminated or potentially contaminated surgery, the recommended dose is a single 1 g IM or IV administered 30 to 90 minutes prior to start of surgery.
The first dose of 1 gram is administered intravenously as soon as the umbilical cord is clamped. The second and third doses should be given as 1 gram intravenously or intramuscularly at 6 and 12 hours after the first dose.
Neonates, Infants, and Children: The following dosage schedule is recommended:
Neonates (birth to 1 month):
0–1 week of age 50 mg/kg per dose every 12 hours IV
1–4 weeks of age 50 mg/kg per dose every 8 hours IV
Infants and Children (1 month to 12 years):
For body weights less than 50 kg, the recommended daily dose is 50 to 180 mg/kg IM or IV body weight divided into four to six equal doses. The higher dosages should be used for more severe or serious infections, including meningitis. For body weights 50 kg or more, the usual adult dosage should be used; the maximum daily dosage should not exceed 12 grams.
Shake to dissolve; inspect for particulate matter and discoloration prior to use. Solutions of CLAFORAN range from very pale yellow to light amber, depending on concentration, diluents used, and length and condition of storage.
As with all IM preparations, CLAFORAN should be injected well within the body of a relatively large muscle such as the upper outer quadrant of the buttock (i.e. gluteus maximus); aspiration is necessary to avoid inadvertent injection into a blood vessel. Individual IM doses of 2 grams may be given if the dose is divided and is administered in different intramuscular sites.
The IV route is preferable for patients with bacteremia, bacterial septicemia, peritonitis, meningitis, or other severe or life-threatening infections, or for patients who may be poor risks because of lowered resistance resulting from such debilitating conditions as malnutrition, trauma, surgery, diabetes, heart failure, or malignancy, particularly if shock is present or impending.
Reconstituted solutions stored in original containers and plastic syringes remain stable for 13 weeks frozen.

Attention

CLAFORAN in the dry state should be stored below 30°C. The dry material as well as solutions tend to darken depending on storage conditions and should be protected from elevated temperatures and excessive light.

NOTES

1. **Discoloration**- the process of changing to a different, less attractive colour
2. **Amber**- hard translucent fossilized resin, typically yellowish in color
3. **Debilitating**- (of a disease or condition) making someone very weak and infirm
4. **Malnutrition**- lack of proper nutrition, caused by not having enough to eat
5. **Impending**- event is one that is going to happen very soon.

10. SYMPATHYL

Pharmaceutical active ingredients containing related brand and generic drugs, medications or other health care products:
Eucharist dry extract
Hawthorn Leading Flowers dry extract
Magnesium (Magnesium Oxide Heavy)

Sympathyl available forms

Tablets, Film-Coated

Composition

Eucharist dry extract 20 mg; Hawthorn Leading Flowers dry extract 75 mg; Magnesium (Magnesium Oxide Heavy) 124.3 mg

Indications and usage

This medication is a mineral supplement used to prevent and treat CNS and heart diseases; Sympathyl is very important for the normal functioning of cells, nerves, muscles, bones, and the heart. Usually, a well- balanced diet provides normal blood levels of magnesium. However, certain situations cause your body to lose Sympathyl faster than you can replace it from your diet. This medicine is mild sedative. It is recommended in adults: for the symptomatic treatment of neurotic states; in case of minor sleep disordes; for disordes due to cardiac erethism with a healthy heart.

Warning

This medicine must never be used in the following cases: to allergy one of the components; severe renal insufficiency . This medicine should not normally be used, except opposite advice of your physician in the following cases: in combination with quinine-like drugs. When in doubt, it is essential to ask your physician or your pharmacist about any other current treatment.

Pregnancy- breast-feeding: It is advisable not to use this medicine during pregnancy. If you discover that you are pregnant during treatment, contact your physician because he only can judge of the necessary to follow it. The use of drug is not recommended during lactation.

How to use this medicine: Dosage: For adult only. The usual dose is 4 tablets per day, taken as 2 tablets in the morning and 2 tablets in the evening.

Made and route of administration: Oral route. Swallow the tablet with a glass of water.

Frequency and time at which drug must administrated: in the morning and in the evening before meal.

Duration of treatment: Do not use in prolonged time without asking for medical advice.

Unwanted and bothersome effects: report any unwanted and bothersome effects not mentioned in the insert leaflet to your physician or pharmacist. Infrequent digestive disorders (diarrhea, abdominal pains)

Storage: use before expiry date indicated on the external packaging.

Special storage conditions: Store at temperature below 25 ^{0}C.

NOTES

1. **Eucharist** -the consecrated elements, especially the bread
2. **brand** - a particular product or a characteristic that serves to identify a particular product
3. **doubt-** disbelieve , distrust
4. **Frequency**- the rate at which something occurs over a particular period of time
5. **Bothersome**- annoying; troublesome-
6. **digest** - break down (food) in the stomach and intestines into substances that can be used by the body

11. ZINACEF

Cefuroxime sodium for Injection or Infusion.

Qualitative And Quantitative Composition

Vials contain either 250mg, 750mg or 1.5g cefuroxime (as sodium).

Pharmaceutical Form

Cefuroxime is a white to cream powder to which appropriate amounts of water are added to prepare an off-white suspension for intramuscular use or a yellowish solution for intravenous administration.

Therapeutic Indications

Zinacef is a bactericidal cephalosporin antibiotic which is resistant to most beta-lactamases and is active against a wide range of Gram-positive and Gram-negative organisms.

Ear, nose and throat infections, sinusitis, tonsillitis and pharyngitis.

Urinary tract infections for example acute and chronic pyelonephritis, cystitis and asymptomatic bacteriuria.
Soft-tissue infections for example cellulitis, erysipelas, peritonitis and wound infections.
Bone and joint infections for example, osteomyelitis and septic arthritis.

Posology and methods of administration

Intramuscular add 1ml water for injections to 250mg Zinacef or 3ml water for injections to 750mg Zinacef. Shake gently to produce an opaque suspension.
Intravenous dissolve Zinacef in water for injections using at least 2ml for 250mg, at least 6ml for 750mg or 15ml for 1.5g. For short intravenous infusion (e.g. up to 30 minutes), 1.5g may be dissolved in 50ml water for injections.

Contraindications

Hypersensitivity to cephalosporin antibiotics.

Special Warnings And Precautions For Use

Special care is indicated in patients who have experienced an allergic reaction to penicillin or beta-lactams. As with interruption of treatment.

Pregnancy and lactation

other antibiotics, prolonged use of cefuroxime may result in the overgrowth of non-susceptible organisms (e.g. Candida, enterococci, Clostridium difficile), which may require

There is no experimental evidence of embryopathic or teratogenic effects attributable to Zinacef but, as with all drugs, it should be administered with caution during the early months of pregnancy. Cefuroxime is excreted in human milk, and consequently caution should be exercised when Zinacef is administered to a nursing mother.

Undesirable Effects

Candida overgrowth from prolonged use;neutropenia, eosinophilia, leukopenia, decreasedhemoglobin concentrathe action of interrupting or being interrupted ion.
Hypersensitivity reactions including skin rash, urticaria and pruritus. Drug fever.
Pain at the intramuscular injection site is more likely at higher doses. However it is unlikely to be a cause for discontinuation of treatment.

Overdose

Overdosage of cephalosporins can cause cerebral irritation leading to convulsions. Serum levels of cefuroxime can be reduced by hemodialysis or peritoneal dialysis.

Pharmacodynamic Properties

Cefuroxime is a bactericidal cephalosporin antibiotic which is resistant to most beta-lactamases and is active against a wide range of Gram-positive and Gram-negative organisms.

Pharmacokinetic Properties

Peak levels of cefuroxime are achieved within 30 to 45 minutes after intramuscular administration. The serum half-life after either intramuscular or intravenous injection is approximately 70 minutes.

Shelf Life

Three years when stored below 25°C and protected from light.

Special Precautions For Storage

Store below 25°C and protect from light.

After constitution, Zinacef should be stored at 2 - 8°C for no longer than 24 hours.

NOTES

1. **soft-tissue** - the soft parts of the human body as distinct from bone and cartilage
2. **opaque**- not able to be seen through; not transparent
3. **overgrowth**- excessive growth
4. **interruption** -the action of interrupting or being interrupted
5. **peritoneal dialysis**- a technique of dialysis used when hemodialysis is inappropriate; it makes use of the peritoneum as an autogenously semipermeable membrane

12. ZOVIRAX Ophthalmic Ointment

Presentation

A near-white translucent ointment containing 3% acyclovir in a sterile, anhydrous, soft paraffin base.

Indications

Zovirax Ophthalmic Ointment is indicated for the treatment of herpes simplex keratitis.

Pharmacology

Acyclovir is an antiviral agent, which is highly active in vitro against herpes simplex (HSV) types I and II and varicella zoster viruses, but its toxicity to mammalian cells is low.

Acyclovir is phosphorylated to the active compound acyclovir triphosphate after entry into a herpes infected cell. The first step in this process requires the presence of the viral-coded thymidine kinase. Acyclovir triphosphate acts as an inhibitor of and substrate for the herpes specified DNA polymerase preventing further viral DNA synthesis without affecting normal cellular processes.

Dosage and administration

The dosage for all age groups is the same. A 10mm ribbon of the ointment should be placed inside the lower conjunctive 5 times a day at approximately 4 hourly intervals. Treatment should continue for at least 3 days after healing.

Contra-indications

Zovirax Ophthalmic Ointment is contra-indicated in patients known to be hypersensitive to acyclovir.

Precautions

Patients should be informed that transient mild stinging immediately following application may occur.

Mutagenicity

The results of a wide range of mutagenicity tests in vitro and in vivo indicate that acyclovir does not pose a genetic risk to man.

Fertility

Largely reversible adverse effects on spermatogenesis in association with overall toxicity in rats and dogs have been reported only at doses of acyclovir greatly in excess of those employed therapeutically. Two-generation studies in mice did not reveal any effect of orally administered acyclovir on fertility. There is no information on the effect of Zovirax Ophthalmic Ointment on human female fertility. Zovirax Tablets have been shown to have no definitive effect on sperm count morphology or motility in man.

Carcinogenicity. Acyclovir was not found to be carcinogenic in long-term studies in the rat and the mouse.

Drug interactions

Probenecid increases the mean half-life and area under the plasma concentration curve of systemically administered acyclovir. Clinical experience has not identified other drug interactions with acyclovir. Other drugs affecting renal physiology could potentially influence the pharmacokinetics of acyclovir.

Side and adverse effects

Transient mild stinging immediately following application of Zovirax Ophthalmic Ointment may occur in a small proportion of patients. Local irritation and inflammation such as blepharitis and conjunctivitis have been reported in patients on Zovirax Ophthalmic Ointment.

Use in pregnancy and lactation

Systemic administration of acyclovir did not produce embryotoxic or teratogenic effects in rabbits, rats or mice. Experience in humans is limited, so the use of Zovirax Ophthalmic Ointment should be considered only when the potential benefits outweigh the possibility of unknown risks. Limited human data show that the drug does pass into breast milk.

Toxicity and treatment of overdosage

No untoward effects would be expected if the entire contents of the tube containing 135mg acyclovir were ingested orally. Doses of 800mg 5 times a day have been administered for 5 days without adverse effects. Single Intravenous doses of up to 800mg/kg have been inadvertently administered without adverse effects. Acyclovir is dialyzable.

Pharmaceutical precautions

Store at a temperature not exceeding 25°C an opened tube of Zovirax Ophthalmic Ointment should be discarded after one month.

NOTES

1. **translucent**- (of a substance) allowing light, but not detailed shapes, to pass through; semi-transparent
2. **mammalian**- relating to mammals
3. **transient**- lasting only for a short time; impermanent
4. **pose**- present or constitute (a problem or danger)
5. **fertility**- the quality of being fertile; productiveness
6. **motile**- capable of motion (motility- noun)
7. **ingest**-take (food, drink, or another substance) into the body by swallowing or absorbing it
8. **inadvertently**- without intention; accidentally
9. **carcinogenesis**- the development of cancerous cells from normal ones

13. RIPRONAT

Pharmaceutical form

Hard gelatin capsules.

Composition

1 capsule of Ripronat contains:

Active ingredients:

3-(2,2-trimethylhydrazinium) propionate dehydrate 250 mg or 500 mg

Inactive ingredients:

Co-processed maize starch, colloidal anhydrous silica, calcium strearate.

Pharmacological group

Medicines for treatment of cardiac diseases.

Pharmacological properties

The medicine can eliminates the function disturbances of somatic and vegetative nerve system in patients with chronic alcoholism in the period of abstinence.

It is well-absorbed following oral administration.

Therapeutic indications

-complex therapy of CHD (stenocardia, myocardial infarction), chronic cardiac insufficiency and dyshormonal cardiomyopathy;

- complex therapy of acute and chronic cerebral circulation abnormalities (cerebral strokes and cerebrovascular deficiency);

-decreased capacity for work, athletic cover exertion (including sportsmen);

-Postsurgical period for acceleration of rehabilitation;
-abstinence syndrome in chronic alcoholism (in combination with a specific therapy of alcoholism) .

Contraindications

-hyper sensitization to the medicine;
-intracranial pressure elevation (in disorder of venous outflow, intracranial tumor).
-there are no sufficient data about safety and efficacy of Ripronat application in children under 12 years old.

Special precaution

Ripronat is not a medicine of the first row at acute coronary syndrome.
Apply the medicine in patients with chronic renal and hepatic impairment for a long time with cautions.

Influence on ability for driving and operating other mechanism

There are no data about unfavorable influence of Ripronat on a reaction rate.

Adverse effects

From CVS side: seldom-tachycardia, changes of arterial pressure.
From CNS side: seldom – psychomotor agitation.
From GIT side: seldom – dyspeptic manifestations.
Allergic reactions: seldom- skin itch, redness, rash, edema.

Dosage and administration

Due to possible excitant effect development it is recommended to take the medicine at the first half of the day.
In cardiovascular diseases as a combined therapy the medicine is prescribed as follows: 500-100 mg/daily as a single dose or divided into 2 doses. The course of treatment is 4-6 weeks.
For sportsmen it is recommended to take in 500-1000 mg 2 times daily before training. The duration of course during training periods is 14-21 days; during competitions is 10-14 days.
In chronic alcoholism the medicine is prescribed in 500 mg 4 times a day.
The course of treatments is 7-10 days.

Overdosage

Quick changes of arterial pressure generally towards hypotension are possible.
Treatment: symptomatic.

Drug interaction

It enhances the action of coronary vasodilating agents, some hypotensive medicines, and cardiac glycosides. Due to the possible development of mild tachycardia and arterial hypotension, prescribe with cautious in the combination with antianginal agents, a anticoagulants, anti-aggregate antidysrhythmic drugs, diuretics, bronchial spasmolytics.

Pregnancy and lactation
The safety of Ripronat during lactation.
Dosage form
Hard gelatinous capsules 250 mg.
10 capsules in blister. 4 or 6 blisters with the leaflet in carton box.
Hard gelatinous capsules 500 mg.
15 capsules in blister. 4 blister with the leaflet in carton box.
Storage conditions
Store in a dry place at temperature not exceeding 25 C.
Keep out of reach of children.
Shelf life
3 years since the manufacture date.
Do not use if the labeled working life is expired.
Sold under prescription.

NOTES

1. **silica**- silicon dioxide, a compound of silicon which is found in sand, quartz, and flint, and which is used to make glass
2. **abstinence**- the practice of restraining from something alcoholic drink
3. **overexertion**- higher physical or mental effort
4. **outflow**- a large amount of money, liquid, or people that moves or is transferred out of a place
5. **intracranial** - within the skull
6. **tumor**- a swelling of a part of the body, generally without inflammation, caused by an abnormal growth of tissue, whether benign or malignant
7. **itch**- an uncomfortable sensation on the skin that causes a desire to scratch
8. **excitant**- a substance that elicits an active physiological or behavioral response
9. **vasodilation**- the dilatation of blood vessels, which decreases blood pressure

14. RIPRONAT (Injections / Capsules)

(Trimethhylhydrazinum Propionate)
Content:
Capsules. Capsule of Ripronat contains 3-(2,2,2-trimethyihydrazinium) propionate dihydrate 250 mg or 500 mg.

Ampoules. Ampoule of Ripronat contains 3-propionate dihydrate 500 mg.
Pharmacological properties
Ripronat is a structural analog of y-butirobetaine - carnitine precursor. Carrying out the functions of y-butirobetaine, it accelerates nerve impulse transmission in a human body. As the result all mental reactions are accelerated, general metabolism is

improved, a tonic effect is observed. There are memory improvements, acceleration of performance of mental tasks, dexterity increasing, and physical performance. It attenuates mental and exercise stress.It improves myocardial contractility and increases exercise tolerance in cardiac insufficiency.

The medicine can eliminates the functional disturbances of somatic and autonomic nervous system in patients with chronic alcoholism in the period of abstinence. It is well-absorbed following oral administration.

Therapeutic indications

- complex therapy of IHD (angina, myocardial infarction), chronic cardiac insufficiency and dyshormonal cardiomyopathy;
- complex therapy of acute and chronic cerebral circulation abnormalities (cerebral strokes and cerebrovascular deficiency);
- decreased capacity for work, athletic overexertion (including sportsmen);
- abstinence syndrome in chronic alcoholism (in combination with a specific therapy of alcoholism).

Contraindications

- hyper sensitization to the medicine;
- elevation of intracranial pressure (including, in disorders of venous outflow, intracranial tumor).

There are no sufficient data about safety and efficacy of Ripronat use in children under 12 years old.

Dosage and administration

In cardiovascular diseases as a combined therapy, the medicine is prescribed as follows: 500-1000 mg/daily as a single dose or divided in two doses. The course of treatment is 4- 6 weeks.

In mental and physical stress it is prescribed orally 250 mg 4 times daily. The course of treatment is 10-14 days. Repeat the therapy in 2-3 weeks if necessary.

For sportsmen it is recommended to take 500-1000 mg 2 times daily before training. The duration of course in training period is 14-21 days; during competitions is 10-14 days.

In chronic alcoholism the medicine is prescribed in 500 mg 4 times daily. The course of treatment is 7-10 days.

Packaging

10capsules 250 mg in blister.4 or 6 blisters with the leaflet in carton box. 15capsules 500 mg in blister.4 blisters with the leaflet in carton box.10 ampoules with leaflet in carton box.

NOTES

1. **dexterity** - skill in using your hands, or sometimes your mind.
2. **attenuate**- to weaken or become weak; reduce in size, strength, density, or value

3. **tolerance-** the capacity to endure continued subjection to something such as a drug without adverse reaction

15. DERMOVATE

Clobetasol propionate

Composition
Cream and Ointment contains clobetasol propionate 0.05%.
Pharmaceutical form
Cream and Ointment.
Indications
- Psoriasis (excluding widespread plaquae psoriasis).
- Recalcitrant eczemas.
- Lichen planus.
- Discoid lupus erythematosus and other skin conditions which do not respound satisfactorily to less active steroids.

Dosage and Administration
Apply sparingly to the aftected area once or twice daily. Therapy should be discontinued when control is achieved. Treatment should not be continued for more than four weeks without the patient's condition being reviewed. Repeated short courses of DERMOVATE may be used to control exacerbations. If continuous steroid treatment is necessary, a less potent preparation should be used.
Overnight occlusion only is usually adequate tobring a satisfactory response. Thereafter improvement can usually be maintained by application without occlusion.
Contraindications
-Hypersensitivity to the preparation; Rosacea; Acne vulgaris; Perioral dermatitis;
Perianal and genital pruritus; Primary cutaneous viral infections(e.g., herpes simplex, chickenpox).
-The use of DERMOVATE skin preparations is not indicated in the treatment of primary infected skin lesions caused by infection with fungi or bacteria; dermatitis in children under one year of age, including dermatitis and napkin eruptions.
Warning s and Precautions
If used in psoriasis careful patient supervision is important. Appropriate antimicrobial therapy should be used whenever treating inflammatory lesions which have become infected.Long –term continuous therapy should be avoided where possible, particularly in infants and children, as adrenal supervision can occur even without occlusion, if DERMOVATE is required for use in children, it is recommended that

the treatment should be reviewed weekly. It should be noted that the infant's napkin may act as an occlusive dressing.

If applied to the eyelids, care is needed to ensure that the preparation does not enter the eye, as glaucoma might result.

Interactions

None reported.

Pregnancy and Lactation

Topical administration of corticosteroids to pregnant animals can cause abnormalities of fetal development. The relevance of this finding to human beings has not been established; however, topical steroids should not be used extensively in pregnancy, i.e. in large amounts or for prolonged periods.

The safe use of DERMOVATE during lactation has not been established.

Effects on Ability to Drive and Use Machines

DERMOVATE is not expected to have any effect.

Adverse Reactions

Adverse events are listed below by system organ class and frequency. Very common, common and uncommon events were generally determined from clinical trial data. The background rates in placebo and comparator groups were not taken into account when assigning frequency categories to adverse events derived from clinical trial data, since these rates were generally comparable to those in the active treatment group, rare and very rare events were generally determined from spontaneous data.

Shelf life

The expiry date is indicated on the packaging.

Special Precautions for Storage

Store below 30°C.

NOTES

1. **lichen** - a simple slow-growing plant which typically forms a low crust-like, leaf-like
2. **sparing** - moderate; economical
3. **exacerbate-** make (a problem, bad situation, or negative feeling) worse
4. **occlusion**- the blockage or closing of a blood vessel or hollow organ
5. **eruptions**- a spot, rash, or other mark appearing suddenly on the skin
6. **placebo –** a substance with no effects that a doctor gives to a patient instead of a drug. Placebos are used when testing new drugs or sometimes when a patient has imagined their illness.

7. spontaneous- performed or occurring as a result of a sudden inner impulse or inclination and without premeditation or external stimulus

16.TAMIFLU

≥

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≤

for patients undergoing routine hemodialysis and continuous peritoneal dialysis with end stage renal disease and for patients with creatinine clearance of ≤10ml/min.

Pregnancy and Lactation. In animal reproductive studies in rats and rabbits, no teratogenic effect was observed. There was no evidence of an effect on fertility at any dose of oseltamivir studied. Fetal exposure in rats and rabbits was approximately 15-20% of that of the mother.

Tamiflu should therefore be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Special Precautions for Storage

Powder: do not store above 25°C

Reconstituted solution: 1 days, do not store above 25°C or 17 days, store in a refrigerator (at 2°C– 8°C).

Discard any unused portion 10 days after constitution.

Package

Capsules 75mg

Bottle containing powder for oral suspension.

NOTES

1. **imprint-** impress or stamp
2. **enhance-** heighten , improve , increase
3. **adjustment-** a small alteration or movement made to achieve a desired fit, appearance, or result
4. **peritoneum-** the membrane lining the cavity of the abdomen and covering the abdominal organs (peritoneal adj.)
5. **justify** -prove to be right or reasonable
6. **clearance -**the action or process of clearing or of being dispersed

17. AUGMENTIN

SUSPENSION 228 mg/5 ml and 457 mg/5 ml

Mixed fruit flavour

Amoxicillin trihydrate - Potassium ciavulanate

Qualitative and quantitative composition

AUGMENTIN suspension 228 mg/5 ml contains 200 mg amoxicillin (as amoxicillin trihydrate) and 28.5 mg clavulanic acid (as potassium ciavulanate) per 5 ml.

Pharmaceutical form

Dry powder for reconstitution in water, at time of dispensing, to form an oral sugar free suspension.

Indications

AUGMENTIN suspension (228 mg/5 ml and 457mg/5 ml), for twice daily oral dosing, is indicated for short term treatment of bacterial infections at the following sites when amoxicillin resistant beta-lactamase producing strains are suspected as the cause, in other situations, amoxicillin alone should be considered.

Dosage and Administration

The usual recommended daily dosage is:

• 25/3.6 mg/kg/day in mild to moderate infections (upper respiratory tract infections e.g. recurrent tonsillitis, lower respiratory infections and skin and soft tissue infections)

Children 2 - 6 years5.0 ml AUGMENTIN suspension 228 mg/5 ml twice daily *or*.mg/kg/day (13-21 kg). 2.5 ml *AUGMENTIN* suspension 457 mg/5 ml twice daily.

Contraindications

AUGMENTIN is contraindicated in patients with a history of hypersensitivity to beta-lactams, e.g. penicillin and cephalosporin.

AUGMENTIN is contraindicated in patients with a previous history of *AUGMENTIN-associated* jaundice/hepatic dysfunction.

Warnings and precautions

Before initiating therapy with *AUGMENT.N,* careful enquiry should be made concerning previous hypersensitivity reactions to penicillin, cephalosporin or other allergens.

Serious and occasionally fatal hypersensitivity reactions have been reported in patients on penicillin therapy. These reactions are more likely to occur in individuals with a history of penicillin hypersensitivity.

Interactions

Concomitant use of probenecid is not recommended. Probenecid decreases the renal tubular secretion of amoxicillin. Concomitant use with *AUGMENTIN* may result in increased and prolonged blood levels of amoxicillin but not of ciavulanate.

Pregnancy and Lactation

Reproduction studies in animals (mice and rats) with orally and parenteral administered *AUGMENTIN* have shown no teratogen effects. In a single study in women with preterm, premature rupture of the fetal membrane, it was reported that prophylactic treatment with *AUGMENTIN* may be associated with an increased risk of necrotizing enterocolitis in neonates.

Effects on Ability to Drive and Use Machines

Adverse effects on the ability to drive or operate machinery have not been observed.

Adverse Reactions

Data from large clinical trials were used to determine the frequency of very common to rare undesirable effects. The frequencies assigned to all other undesirable effects (i.e. those occurring at <1/10,000) were mainly determined using post-marketing data and refer to a reporting rate rather than a true frequency.

NOTES

1. **flavor**- the distinctive taste
2. **dispensing**- distribution
3. **recurrent**- happening or tending to happen again or repeatedly
4. **enquiry**- an act of asking for information
5. **concomitant**- naturally accompanying or associated
6. **premature**- early , untimely
7. **rupture**- break or burst suddenly

18. PANFOR SR

Composition

Each uncoated sustained release tablet contains:

Panfor SR 500

Inactive ingredients: Hypromellose, Carboxymethylcellulose Sodium methacryclic acid copolymer, Macrogol, povidone, colloidal anhydrous silica, purified Talc, Magnesium stearate.

Pharmacology

Metformin hydrochloride is an antihydroergicemic agent, which improves glucose tolerance (in the type 2 diabetes mellitus) subjects, lowering both basal and postprandial plasma glucose. Its pharmacological mechanism of action are different from those of sulfonylureas. Metformin decrease hepatic glucose production and improves insulin sensitivity.

Indication

In maturity onset (non-insulin dependent) obese diabetics in whom diet alone has failed as monotheraphy or in combination with insulin, glitazone or sulfonylureas.

Glitazone is used in combination with metformin hydrochloride when glycemic control is poor on Metformin hydrochloride monotheraphy and maximum tolerated dose of Metformin hydrochloride is preferred to glitazone plus sulfonylurea, particularly for obese patients.

Dosage and administration

Dosage of Panfor SR must be individualized on the basis of both effectiveness and tolerance in patients. The maximum recommended daily dose of 2000mg shouldn't be exceeded.

The drug should be started at a low dose, with gradual dose escalation, both to reduce gastrointestinal side effects and to permit identification of the minimum dose required for adequate glycemic control of the patient.

During treatment initiation and dose titration, fasting plasma glucose should be used to determine the therapeutic response to the drug and identify the minimum effective dose for the patient.

Contraindication

Renal or hepatic failure, alcoholism, complicated by severe ketosis and acidosis diabetic precoma and coma, patients undergoing surgery, after severe trauma or during infections, chronic obstructive pulmonary disease, cardiac failure, peripheral vascular disease, pregnancy, hypoglycemia and know to Metformin.

Precautions

Adjust dose according to blood glucose levels during the first few month.

Lactation

Studies have not been conducted in nursing mothers, but caution should exercise in such patients, and a decision should be made to discontinue the drug, taking into account the importance of the drug to the mother.

Adverse effects

Gastrointestinal disturbances: nausea, diarrhea, gastric pain, constipation, vomiting, metallic taste in mouth.

Dermatological effects: rash, pruritus, urticaria, erythema and flushing.

Miscellaneous: headache and dizziness.

Overdosage and treatment

Hemodialysis may be useful for removal of accumulating drug from patients in whom Metformin hydrochloride over dosage is suspected.

Storage

Store below 25^0 C protect from light and moisture.

Shelf life

36months.

NOTES

1. **sustained**- strengthen or support
2. **maturity**- the state of being fully developed or adult
3. **onset**-beginning , commencement , start
4. **obese-** grossly fat or overweight
5. **gradual**- taking place or progressing slowly or by degrees
6. **initiation**- the action of beginning something
7. **titration**- an operation, used in volumetric analysis, in which a measured amount of one solution is added to a known quantity of another solution until the

reaction between the two is complete. If the concentration of one solution is known, that of the other can be calculated

8. **obstructive-** causing a blockage or obstruction
9. **flushing-** an extra feeding given to ewes before mating to increase the lambing percentage
10. **moisture** – wetness, dry

19. ATELVIA

(Risedronate sodium) delayed-release tablets

What is the most important information I should know about Atelvia

Atelvia may cause serious problems in your stomach and esophagus (the tube that connects your mouth and stomach), such as:

- trouble swallowing
- heartburn
- ulcers

You may feel pain in your bones, joints, or muscles

Stop taking Atelvia and call your healthcare provider right away if you have:

- pain when swallowing
- trouble swallowing
- chest pain
- new or worse heartburn
- indigestion or heartburn that does not go away

You must take Atelvia exactly as your healthcare provider tells you to take it to work and to lower your chance of having serious side effects.

Atelvia is a prescription medicine used to:

- treat osteoporosis in postmenopausal women

Who should not take Atelvia?

Do not take Atelvia if you:

- take a medicine called Risedronate sodium (Actonel). Atelvia and Actonel contain the same medicine;
- have certain problems with your esophagus, the tube that connects your mouth and stomach;
- cannot sit or stand up for at least 30 minutes;
- have low blood calcium (hypocalcemia);
- have kidney problems;
- are allergic to Risedronate sodium or any of the other ingredients in Atelvia. See the end of this leaflet for a complete list of ingredients in Atelvia.

Tell your doctor about all the medicines you take, including prescription and non-prescription medicines, vitamins and herbal supplements. Using Atelvia with certain

!other medicines may affect each other causing side effects.
Especially tell your healthcare provider if you take:

- Actonel or other medicines to treat osteoporosis
- Calcium supplements
- antacids
- laxatives
- iron supplements

Know the medicines you take. Keep a list of them to show your healthcare provider and pharmacist when you get a new medicine.

How should I take Atelvia?

- Take Atelvia 1 time a week right after breakfast. Choose a day of the week to take Atelvia that best fits your schedule.
- Take Atelvia with at least 4 ounces (about 1 -half cup) of plain water.
- Take Atelvia while you are sitting up or standing. After taking Atelvia you must wait at least 30 minutes before lying down.
- Swallow Atelvia tablets whole. Do not chew, cut, or crush Atelvia tablets before swallowing. If you cannot swallow Atelvia tablets whole, tell your healthcare provider. You may need a different medicine.
- If you miss your weekly Atelvia dose, take Atelvia the morning after you remember then return to your usual schedule of 1 tablet on your chosen day of the week.

- You should not take 2 Atelvia tablets on the same day.

The most common side effects of Atelvia include:

- diarrhea
- flu-like symptoms
- muscle pain
- back and joint pain
- upset stomach
- stomach pain

How should I store Atelvia?

- Store Atelvia between 68° F to 77° F (20° Cto 25° C)
- Safely throw away medicine that is out of date or no longer needed.

Keep Atelvia and all medicines out of the reach of children.
What are the ingredients in Atelvia?
Active ingredient: Risedronate sodium
Inactive ingredients: Edetate disodium, ferric oxide yellow, magnesium stearate, methacrylic acid copolymer, polysorbate 80, silicified microcrystalline cellulose, simethicone, sodium starch glycolate, stearic acid, talc, and triethyl citrate.

NOTES

1. **heartburn**- a painful burning sensation in your chest, caused by indigestion.

2. **antacids**- preventing or correcting acidity
3. **postmenopausal**- existing or taking place after the menopause
4. **esophagus**- the part of the alimentary canal that connects the throat to the stomach; the gullet. In humans and other vertebrates it is a muscular tube lined with mucous membrane
5. **indigestion**- pain or discomfort in the stomach associated with difficulty in digesting food
6. **plain**-ordinary

20. GEPTRAL

Composition and form

Pills in enteric soluble clad contain ademetionin 1,4 – butanediolsulfonate 760 mg or 400 mg ademetionin; blister in 10 pcs. 2 feet blister with lyophilizate for injection 760 mg or 400mg ademetionine; together with a solvent–l–lysine-buffer solution of caustic soda, injection on 5ml in the package five sets.

Pharmacokinetics

Pill covered special liner is dissolved only in the gut, which ademetionine released in the gastrointestinal bleeding, which they lost.

Indications

intrahepatic conditions, depression, including derivatives.

Pregnancy and lactation

It should refrain from appointment to the I and II trimester of pregnancy.

Contraindications

Hypersensitivity

Side effects

Not identified (either to the long-term use or at the high dosage). Some patients may be unpleasant feeling in epigastria (active substance in acid pH), but they usually are few and not a cause for the termination of treatment.

Overdosing

The clinical manifestations are not available.

Precautions

The solution should be prepared immediately before use. If color of pill differ from the proper white, it is necessary to refrain from their use. The tonic effect, it is not recommended to take the drug at bedtime.

Dosing and administration

Inside (very slowly). Intensive therapy 1-2 bottle a day in the first two or three weeks of treatment. Supportive therapy-table 2-4 per day (between meals, swallowing, not liquid).

Storage conditions
The temperature is not above 25 ^{0}stable.

NOTES
1. **clad-** a combining form
2. **gut**-the stomach or belly
3. **bleeding-**hemorrhage
4. **derivative -** something which has been developed or obtained from something else.
5. **refrain -** stop oneself from doing something
6. **termination -**the action of terminating something or the fact of being terminated

21. CLAFORAN
Cefatoxin sodium

Solution for injection
Identification of the medicine
Composition
Cefatoxin sodium
Quantity equivalent to Cefatoxime…….1 g for one vial
Presentation with solvent:
Water for injection……4ml for one ampoule
Pharmaceutical form
Claforan 1g IV/IM: powder for injection
Claforan 1g IV with BIO-SET: powder for infusion
Claforan 1g IV/IM: powder and diluents for injection

When this medicine should be used:
This medicine is indicated for the treatment of severe infections, particularly septicemia, endocarditis and meningitis; the prevention of infections during endoscopic resections of the prostate.

When this medicine should not be used:

This medicine must never be used in the event of allergy to antibiotics in the cephalosporin group.
Special warnings
Treatment must be discontinued and appropriate therapy initiated in the event of onset of any symptom of allergy. Before taking this treatment, you should inform

your doctor if you have shown urticaria, other skin rashes, itching or angioedema during prior treatment with antibiotics.

Precautions for use

This medicine should be used with care in the event of impaired renal function. Ensure monitoring of the renal function especially, during combination with potentially nephrotoxic antibiotics or with certain diuretics. In the event of a low- salt diet, account should be taken of the sodium content in this product: 50,5mg sodium per gram . If in doubt do not hesitate to ask your doctor or pharmacist for advice.

Drug interactions and other interactions

In order to prevent possible interactions between several medicines, you must systematically inform your doctor or pharmacist if you are taking any other medicines.

Pregnancy- breast-feeding:

This medicine should only be used during pregnancy if advised by your doctor. If discover that you are pregnant during treatment, consult your doctor who judge whether it is necessary to purse it.

Breast-feeding is possible during the administration of this medicine. If the infant shows disorders such as diarrhea, allergy or skin rash, inform your doctor who will provide advice concerning management, as these effects may be caused by the medicine.

How to use this medicine:

Adults:

-On average, 3 per day, which may be increased to 12g, depending on the infection.

- In the case of urinary tract infection: 2g per day.

-Meningitis: 200 to 300mg/ kg/ day

Children, infants and neonates:

-On average, 50 mg/ kg/ day, divided in three IV injections. This dosage may be increased up to 200 mg/ kg/ day, depending on the severity of the infection.

Methods and route of administration:

This medicine should be administered by:

-direct IV administration or in an infusion lasting from 20 to 60 minutes.

-IM administration by a deep injection and in full muscle mass.

Storage: do not exceed the date indicated on the external packaging.

Special storage conditions: Store at temperature below 30 ^{0}C.

Keep out of reach of children.

Notes:

1. **septicemia** - blood poisoning
2. **endocarditis-** inflammation of the endocardium
3. **purse-** a pouch of skin containing the testicles, the testes in most mammals
4. **hesitate** - falter , flounder , vacillate , waver

5. **concerning-** refer , relate

22. BETADINE oral antiseptic

Composition:
Each 100ml contains Mundidone brand of povidone-iodine 1,00g equivalent to 0,1 %m/v available iodine. Contains 8,5% v/v alcohol.
Pharmacological action:
Povidone-iodine s a multivalent broad spectrum local antiseptic having bacterial properties. The effect on vegetative cells of various bacteria and fungi is due to the liberation of free iodine from complex. Many viruses, protozoa, yeasts, cysts and spores are also susceptible.
Indications:
Medicine is recommended for relief of painful infections and inflammatory conditions of the mouth and inflammatory conditions of the mouth and pharynx and routine mouthwash.
Contraindications:
Sensitivity to povidone-iodine. Patients with non-toxic nodular colloid goiter or patients with a history of thyroid disease should not use povidone-iodine.
Warning:
1. Not to be used by persons who are allergic to iodine.
2. Not to be used in pregnancy or lactating women.
Dosage and direction for use:
As a mouthwash: Dilute one part of **Betadine oral antiseptic** with two parts of water, rinse mouth thoroughly and spit out or use as directed by physicion or dentist.
For infections of mouth and throat: Use full strength and rinse or gargle for 30 second out, repeat hourly, or as directed by physician or dentist.
For children under 3 years: dilute one part **Betadine oral antiseptic** with three parts water and paint the mouth with the aid of a cotton-bud.
Side effects and special precautions: Certain individuals may become sensitized to porvidone-iodine. Hyposensitivity reactions may include urticaria, angioedema, cutaneous hemorrhage or purpuras, fever, arthralgia, lymphadenopathy and eosinophilia. If irritation, swelling or redness occurs, discontinue treatment and consult your physician. If severe or persistent sore throat , or sore throat accompanied by high fever, headache, nausea and vominting occur, consult your physician promptly as these symptoms may indicate a serious condition. Absorption of povidone-iodine may interfere with thyroid function tests.
Identification: Betadine oral antiseptic is a clear dark-brown solution with a characteristic menthol odour and taste.
Presentation:
Bottles of 200ml.
Storage instructions:

Store below 25^0C.
Keep out of reach of children.

NOTES

1. **the liberation**- the act of setting someone free; release
2. **protozoa -** the single-celled microscopic animals
3. **yeast -**a microscopic fungus consisting of single oval cells that reproduce by budding
4. **cyst** - a membranous sac or cavity of abnormal character in the body, containing fluid
5. **rinse-** wash (something) with clean water to remove soap, detergent, dirt, or impurities
6. **gargle-** to rinse (the mouth and throat) with a liquid, esp a medicinal fluid by slowly breathing out through the liquid
7. **persistent-** constant, insistent
8. **promptly**- with little or no delay; immediately

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