O`ZBEKISTON RESPUBLIKASI SOG`LIQNI SAQLASH VAZIRLIGI
TOSHKENT FARMATSEVTIKA INSTITUTI

ZAMONAVIY DORIVOR PREPARATLAR ANNOTATSIYALARINI INGLIZ TILIDAN TARJIMA QILISH UCHUN O`QUV-USLUBIY QO`LLANMA

TOSHKENT - 2013

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“Tasdiqlayman”

O`quv ishlari bo`yicha prorektor v/b

f.f.d., prof. Zaynutdinnov X.S.____

“ 9 ” aprel 2013 yil

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O'quv-uslubiy qo'llanma amaliy ingliz tilini o`qitish uchun bakalavr yo`nalishi talabalariga mo`ljallangan.

O'quv-uslubiy qo'llanma markaziy uslubiy kengashda muhokoma qilindi.
" 26 " mart 2013 yil 8 - sonli bayonnomasi

O'quv-uslubiy qo'llanma institut ilmiy kengashida muhokoma qilindi.
" 8 " aprel 2013 yil 9 - sonli bayonnomasi

SO’Z BOSHI

Mazkur o’quv-uslubiy qo’llanma Farmatsevtika institutining yuqori bosqichida ta’lim olayotgan talabalarga mo’ljallangan bo’lib, amaldagi dasturga muvofiq tuzilgan.

Chet tilini bilish va o’z mutaxassisligiga oid ilmiy adabiyotlarni o’qish va tushunish hozirgi zamon mutaxassislariga qo’yiladigan muhim talablardan biridir. Ushbu o’quv-uslubiy qo’llanmaning vazifasi talabalarni o’z mutaxassisliklariga oid matnlarni o’qish-tushunish va lug’at yordamida tarjima qilish, farmatsiyaga oid terminologiya bilan kengroq tanishish, o’z mutaxassisliklariga tegishli adabiyotlardan mustaqil foydalanishga tayyorlashdan iboratdir.

Qo’llanmadagi matnlar original manbalardan olingan bo’lib, har birining oxirida murakkab so’z va iboralarning o’zbekcha va ruscha tarjimalari berilgan. Bu talabalarga tarjima jarayonida yordam beradi, deb umid qilamiz.

HOW SUPPLIED

Suspension: 750 mg/5 ml

ACTION

Unknown. Appears to interfere with electron transport in protozdal mitochondria, inhibiting enzymes needed for the synthesis of nucleic acids and adenosine triphosphate.

ONSET, PEAK, DURATION

Onset and duration unknown. Two peak plasma levels occur after an oral dose, suggesting enterohepatic recycling. The first occurs after 1 to 8 hours; the second occurs after 1 to 4 days.

INDICATIONS & DOSAGE

Acute, mild to moderate Pneumocystis carinii pneumonia in patients who cannot tolerate co-trimxazole -

Adults: 750 mg P.O. b.i.d. with food for 21 days.

ADVERSE REACTIONS

CNS: headache, insomnia, asthenia, anxiety, dizziness.

EENT: cough, sinusitis, rhinitis, taste perversion.

GI: nausea, diarrhea, vomiting, constipation, abdominal pain, anorexia, dyspepsia.

Skin: rash, pruritus, diaphoresis.

Other: fever, oral monilia, pain, hypoglycemia, hypotension.

INTERACTIONS

Rifampin, rifabutin: decreases atovaquone's steady state concentration. Avoid concurrent use.

EFFECTS ON DIAGNOSTIC TESTS

None known.

CONTRAINDICATIONS

Contraindicated in patients with hypersensitivity to the drug.

NURSING CONSIDERATIONS

-Use cautiously in breast-feeding patients. In animal studies, drug was excreted in breast milk.

-Because drug is highly bound to plasma protein (greater than 99.9%), also use cautiously with other highly protein-bound drugs.

- Because of the risk of other concurrent pulmonary infections, monitor patients closely during therapy.

PATIENT TEACHING

-Instruct patient to take drug with meals because food enhances absorption significantly.

NOTES

1. to interfere – тўсқинлик қилмоқ - препятствовать
2. insomnia – уйқусизлик - бессонница
3. taste perversion – таъм сезишнинг бузилиши – расстройство восприятия вкуса
4. oral monilia – оғиз бўшлиғи шиллиқ қавати микози – микоз слизистой оболочки полости рта
5. enhance – кучайтирмоқ, оширмоқ – усиливать, увеличивать

METRONIDAZOLE

HOW SUPPLIED

Tablets: 200 mg, 250 mg, 375 mg, 400 mg,500 mg

Oral suspension (benzovl metronidazole): 200 mg/5 ml

Injection: 500 mg/100 ml ready to use

Powder for injection: 500-mg sinsledose vials

ACTION

A direct-acting trichomonacide and amebicide that works at both intestinal and extraintestinal sites. It is thought to enter the cells of microorganisms that contain nitroreductase. Unstable compounds are then formed that bind to DNA and inhibit synthesis, causing cell death.

ONSET, PEAK, DURATION

Onset occurs immediately after I.V infusion, unknown after oral administration. Peak plasma levels occur immedi-nicly after I.V. infusion and within 1 to 2 hours of oral administration. Duration unknown.

INDICATIONS & DOSAGE

Amebic hepatic abscess-

Adults: 500 to 750 mg P.O. t.i.d. for 5 to 10 days.

Children: 30 to 50 mg/kg daily (in three doses) for 10 days.

Intestinal amebiasis-

Adults: 750 mg P.O. t.i.d. for 5 to 10 days.

Children: 30 to 50 mg/kg daily (in three doses) for 10 days.

Trichomoniasis-

Adults: 250 mg P.O. t.i.d. for 7 days or 2 g P.O. in single dose (may give the 2-g dose in two 1-g doses, each on the same day); 4 to 6 weeks should elapse between courses of therapy.

Children: 5 mg/kg dose P.O. t.i.d. for 7 days.

Refractory trichomoniasis-

Adults: 250 mg P.O. b.i.d. for 10 days. Alternatively, 500 mg P.O. b.i.d. for 7 days.

Bacterial infections caused by anaerobic microorganisms-

Adults: loading dose is 15 mg/kg I.V. infused over 1 hour (approximately 1 g for a 70-kg adult). Maintenance dose is 7.5 mg/kg I.V. or P.O. q 6 hours (approximately 500 mg for a 70-kg adult).First maintenance dose should be given 6 hours after loading dose. Maximum dosage not to exceed 4 g daily.

Giardiasis-

Adults: 250 mg P.O. t.i.d. for 5 to 7 days or 2 g P.O. once daily for 3 days.

Chilldren: 5 mg/kg P.O. t.i.d. for 5 to 7 days.

Prevention of postoperative infection in contaminated or potentially contaminated colorectal surgery-

Adults: 15 mg/kg I.V. infused over 30 to 60 minutes and completed about 1 hour before surgery. Then, 7.5 mg/kg I.V. infused over 30 to 60 minutes at 6 and 12 hours after initial dose.

ADVERSE REACTIONS

CNS: vertigo, headache, ataxia, dizziness, syncope, incoordination, confusion, irritability, depression, weakness, insomnia, seizures, peripheral neuropathy.

CV: ECG change (flattened T wave), edema (with I.V. RTU preparation).

GI: abdominal cramping, stomatitis, epigastric distress, nausea, vomiting, anorexia, diarrhea, constipation, procti tis, dry mouth.

GU: darkened urine, polyuria, dysuria, cystitis, decreased libido, dyspareunia, dryness of vagina and vulva, vaginal candidiasis.

Hematologic: transient leukopenia, neutropenia.

Skin: flushing, rash.

Other: overgrowth of nonsusceptible organisms, especially *Candida* (glossitis, furry tongue); metallic taste; fever; thrombophlebitis after I.V. infusion; fleeting joint pains, sometimes resembling serum sickness.

INTERACTIONS

Cimetidine: increased risk of metronidazole toxicity because of inhibited hepatic metabolism. Monitor closely.

Disulfiram: acute psychoses and confusional states. Don't use together.

Ethanol: disulfiram-like reaction (nausea, vomiting, headache, cramps, flushing). Don't use together.

Lithium: increased lithium levels resulting in possible toxicity. Monitor serum lithium levels closely

Oral anticoagulants: increased antico-agulant effects. Monitor closely

Phenytoin, phenobarbital: decreased metronidazole effectiveness. Monitor closely.

EFFECTS ON DIAGNOSTIC TESTS

Metronidazole may interfere with the chemical analyses ofaminotransferases and triglyceride, leading to falsely decreased values. It may flatten the T waves on an ECG or interfere with AST , ALT, lactate dehydrogenase, and glucose levels.

CONTRAINDICATIONS

Contraindicated in patients with hypersensitivity to the drug or other nitroimidazole derivatives.

NURSING CONSIDERATIONS

- Use cautiously in patients with a history of blood dyscrasia or CNS disorder and m patients with retinal or visual field changes. Use cautiously in patients with hepatic disease or alcoholism and in conjunction with hepatotoxic drugs.

-If indicated during pregnancy for trichomoniasis, be aware that the 7-day regimen is preferred over the 2-g single- dose regimen.

-Give oral form with meals.

- I.V. use: No preparation is necessary for RTU (ready to use). To prepare lyophilized vials of metronidazole, add 4.4 ml of sterile water for injection, bacteriostatic water for injection, sterile 0.9% sodium chloride for injection, or bacteriostatic 0.9% sodium chloride for injection. The reconstituted drug contains 100 mg/ml. Add the contents of the vial to 100 ml of D_5W, lactated Ringer's injection, or 0.9% sodium chloride for a final concentration of 5 mg/ml. The resulting highly acidic solution must be neutralized before administering. Carefully add 5 mEq sodium bicarbonate for each 500 mg metronidazole; carbon dioxide gas will form and may need to be vented.

Alert: Infuse drug over at least 1 hour.Don't give I.V. push.

-Don't refrigerate the neutralized diluted solution. Precipitation may occur. If Flagyl I.V RTU is refrigerated, crystals may form. These disappear after the solution warms to room temperature.

- Observe for edema, especially in patients receiving corticosteroids; Flagyl I.V. RTU may cause sodium retention.

-Record number and character of stools when used in the treatment of amebiasis. Metronidazole should be used only after *Trichomonas vaginalis* has been confirmed by wet smear or culture or *Entamoeba histolytica* has been identified. Asymptomatic sexual partners of patients being treated for T.*vaginalis* infection should be treated simultaneously to avoid reinfection.

PATIENT TEACHING

- Instruct patient to take oral form with food to minimize GI upset.
- Inform patient that sexual partners should be treated simultaneously to avoid reinfection.

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-Instruct patient in proper hygiene.

-Tell patient to avoid alcohol or alcohol-containing medications during therapy and for at least 48 hours after therapy is completed.

-Tell patient metallic taste and dark or red-brown urine may occur.

NOTES

1. unstable – нотурғун - нестабильный
2. elapse – ўтмоқ – проходить, пройти
3. prevention – олдини олиш - предотвращение
4. syncope – ҳушдан кетиш - обморок
5. dry mouth – оғиз қуриши – сухость во рту
6. rash – тошма - сыпь
7. retinal – кўз тўр пардаси – сетчатка глаза
8. visual – кўриш қобилияти - зрительный
9. in conjunction – биргаликда – в сочетании
10. simultaneously – баравар - одновременно

PENTAMIDINE ISETHIONATE

HOW SUPPLIED

Injection: 300-mg vial

Aerosol: 300-mg vial

ACTION

Interferes with biosynthesis of DNA, RNA, phospholipids, and proteins in susceptible organisms.

ONSET, PEAK, DURATION

Unknown except peak serum levels occur ½ to 1 hour after I.M. injection, immediately after I.V. infusion.

INDICATIONS & DOSAGE

Pneumocystis carinii *pneumonia-*

Adults and children: 3 to 4 mg/kg I.V. or I.M. once daily for 14 to 21 days.

Prevention of P. carinii pneumonia in high-risk individuals-

Adults: 300 mg by inhalation (using a Respirgard II nebulizer) once every 4 weeks.

ADVERSE REACTIONS

CNS: confusion, hallucinations, fatigue, dizziness, headache.

CV: hypotension, ventricular tachycardia, chest pain.

GI: nausea, metallic taste, decreased appetite, phanmgitis, vomiting, diarrhea, abdominal pain, anorexia, bad taste in mouth.

GU: elevated serum creatinine, **acute renal failure.**

Hematologic: leukopenia, **thrombocytopenia,** anemia.

Hepatic: elevated liver function tests.

Respiratory: *cough, bronchospasm,shortness of breath,* pneumothorax.

Skin: rash, **Stevens-Johnsmi syndrome.**

Other: hypoglycemia, hypocalcemia, *sterile abscess, pain or induration at injection site, congestion, night sweats.*

chills, edema, myalgia.

INTERACTIONS

Aminoglycosides, amphotericin B, capreomycin, cisplatin, colistin, metho-xyflurane, polymyxin B,vancomycin: imcreased risk of nephrotoxicity.

EFFECTS ON DIAGNOSTIC TESTS

BUN, serum creatinine, AST and ALT levels may increase during pentamidine therapy. Hyperkalemia and hypocalcemia may occur. Hypoglycemia may occur initially; later, hyperglycemia may result from pancreatic cell damage.

CONTRAINDICATIONS

Contraindicated in patients with a history of an anaphylactic reaction to drug.

NURSING CONSIDERATIONS

-Use cautiously in patients with hypertension,hypotension,hypoglycemia, hypocalcemia,leucopenia,thrombocy- topenia, anemia, or hepatic or renal dysfunction.

- Administer the aerosol form only by Respirgard II nebulizer. Dosage recommendations are based on the particle size and delivery rate of this device. To administer aerosol, mix the contents of one vial in 6 ml of sterile water for injection. Do not use 0.9% sodium chloride solution. Do not mix with other drugs.

-Do not use low-pressure (less than 20 psi) compressors. The flow rate should be 5 to 7 liters/minute from a 40- to 50-psi air or oxygen source.

- **I.V. use:** Reconstitute drug with 3 ml of sterile water for injection. Then dilute in 50 to 250 ml of D_5 W. Inject over at least 60 minutes.

Alert: To minimize risk of hypotension when the drug is given I.V, infuse drug slowly with the patient lying down.

Closely monitor blood pressure.

-For I.M. injection, reconstitute drug with 3 ml of sterile water for a solution containing 100 mg/ml; administer deeply. Expect pain and induration.

- Monitor blood glucose, serum calcium, serum creatinine, and BUN levels daily. After parentheral administration, blood glucose level may decrease initially; hypoglycemia may be severe in 5% to 10% of patients. This may be followed by hyperglycemia and insulin-dependent diabetes mellitus, which may be permanent.

- In patients with AIDS, be aware that pentamidine may produce less severe adverse reactions than cotrimoxazole.

PATIENT TEACHING

- Instruct the patient to use the aerosol device until the chamber is empty, which may take up to 45 minutes.

- Warn the patient that I.M. injection is painful.

NOTES

1. susceptible – таъсирчан - чувствительный
2. fatigue – чарчоқ - утомление
3. abdominal pain – қорин оғриғи – боль в животе
4. failure – етишмовчилик - недостаточность
5. cell damage – ҳужайра жароҳати – повреждение клетки
6. dysfunction – етишмовчилик - недостаточность
7. empty – бўш - пустой

AMPHOTERICIN B

HOW SUPPLIED

Tablets: 100 mg

Oral suspension: 100 mg/ml

Lozenges: 10 mg

Injection: 50-mg lyophilized cake

ACTION

Unknown. Probably acts by binding to sterol in the fungal cell membrane, altering cell permeability and allowing leakage of intracellular components.

ONSET, PEAK, DURATION

Onset is immediate and serum levels peak immediately after I.V. infusion. Onset, peak, and duration are unknown after oral administration.

INDICATIONS & DOSAGE

Systemic fungal infections (histoplasmosis, coccidioidomycosis, blastomycosis, cryptococcosis, disseminated inoniliasis, aspergillosis, phycomycosis),meningitis-

Adults: initially, a test dose of 1 mg in 20 ml of D_5 W infused I.V. over 20 to 30 minutes may be recommended. If tolerated, daily dosage is then initiated as 0.25 to 0.3 mg/kg daily by slow I.V. infusion (0.1 mg/ml) over 2 to 6 hours. Daily dosage is gradually increased to maximum 1 mg/kg daily If drug is discontinued for I week or more, drug is resumed with initial dose and increase gradually.

Infections of the Gf tract caused by Candida albicans-

Adults: 100 mg P.O. q.i.d. for 2 weeks.

Oral and perioral candidal infections-

Adults: 1 lozenge q.i.d. for 7 to 14 days. Lozenge should dissolve slowly.

ADVERSE REACTIONS

CNS: *headache,* peripheral neuropathy, **seizures.**

CV: hypotension, **cardiac arrhythmias, asystole,** hypertension.

EENT: hearing loss, tinnitus, transient vertigo, blurred vision, diplopia.

GI: *anorexia, weightless, nausea, vomiting, dyspepsia, diarrhea, epigastric pain, cramping,* melena, **hemorrhagic gastroenteritis.**

GU: abnormal renal function with hypokalemia, azotemia, hypostheniiria. renal tubular acidosis, nephrocalcirnosis; with large doses-**permanent renal impairment**, anuria, oliguria.

Hematologic: *normochromic, normocytic anemia,* **thrombocytopenia,** leukopenia, **agranulocytosis**, eosino- philia, leukocytosis.

Hepatic: hepatitis, jaundice, **acute liver failure.**

Respiratory: dyspnea, tachypnea, bronchospasm, wheezing.

Skin: maculopapular rash, pruritus (without rash).

Other: arthralgia, tissue damage with extravasations, *phlebitis, thrombophlebitis, pain at injection site,* myalgia, *fever, chills, malaise, generalized pain,* flushing, **anaphylactic reactions.**

INTERACTIONS

Corticosteroids: enhanced potassium depletion. Monitor serum potassium levels,

Digitalis glycosides: increased risk of digitalis toxicity in potassium-depleted patients. Monitor closely.
Flucytosine: synergistic effect; may cause increased toxicity of flucytosine. Monitor closely.
Other nephrotoxic drugs, such as antibiotics or antineoplastic agents: may cause additive renal toxicity. Administer cautiously.

EFFECTS ON DIAGNOSTIC TESTS

Amphotericin B therapy may increase BUN, serum creatinine, alkaline phosphatase, and bilirubin levels. The drug
may also cause hypokalemia and hypomagnesemia and may decrease WBC, RBC, and platelet counts.

CONTRAINDICATIONS

Contraindicated in patients with hypersensitivity to the drug.

NURSING CONSIDERATIONS

- Use cautiously in patients with impaired renal function.

Alert: To reduce severe adverse reactions, be aware that the patient may receive premedication with antipyretics, antihistamines, antiemetics, or small doses of corticosteroids; addition of phosphate buffer and heparin to the solution; and alternate-day schedule. For severe reactions, discontinue drug and notify doctor.

- Monitor fluid intake and output; report change m urine appearance or volume. Monitor BUN and serum creatinine (or creatinine clearance) at least weekly. Kidney damage is typically reversible if drug is stopped at first sign of dysfunction.
- Obtain liver and renal function studies weekly, if ordered. Drug may be stopped if alkaline phosphatase or bilirubin levels increase. If BUN exceeds 40 mg/100 ml, or if serum creatinine exceeds 3 mg/100 ml, doctor may reduce or stop drug until renal function improves. Monitor CBC weekly.
- Monitor potassium levels closely, and report signs of hypokalemia. Cheek calcium and magnesium levels twice weekly, as ordered.
- **I.V. use:** Be prepared to give initial test dose as prescribed. Monitor the patient's pulse, respiratory rate, temperature, and blood pressure for at least 4 hours.
- Use an infusion pump and in-line filter with mean pore diameter larger than 1 micron. Rapid infusion may cause cardiovascular collapse.
- Choose I.V. sites in distal veins. If veins become thrombosed, alternate administration sites.
-Monitor vital signs every 30 minutes; fever, shaking chills, and hypotension may appear 1 to 2 hours after start of I.V. infusion and should subside within 4 hours of stopping drug.
- Be aware that reconstituted solution is stable for 1 week under refrigeration or 24 hours at room temperature. It has 8-hour stability in room light.
- Give antibiotics separately; don't mix or piggyback them with amphotericin B.
- Know that amphotericin B seems to be compatible with limited amounts of heparin sodium, hydrocortisone sodium succinate, and methylprednisolone sodium succinate.
- Store the dry form at 2^0 to 8^0 C (35.6^0 to 46.4^0 F). Protect from light. Reconstitute with 10 ml of sterile water only.

To avoid precipitation, do not mix with solutions containing sodium chloride, other electrolytes, or bacteriostatic agents (such as benzyl alcohol). Do not use if solution contains precipitate or foreign matter.

PATIENT TEACHING

-Warn the patient of possible discomfort at I.V. site and of other potential adverse reactions. Instruct the patient to report signs and symptoms of hypersensitivity immediately.

- Inform patient that therapy may take several months. Stress importance of compliance and recommended follow- up.

NOTES

1. permeability – ўтказувчанлик – проницаемость
2. seizures – хуруж – приступ
3. jaundice – сариқ касал – желтуха
4. to reduce – пасайтирмоқ – снижать
5. precipitation – чўкма – осадок

FLUCYTOSINE (5-FLUOROCYTOSINE, 5-FC)

Ancobon, Ancotil

Pregnancy Risk Category: C

HOW SUPPLIED

Capsules: 250 mg, 500 mg

ACTION

Unknown. Appears to penetrate fungal cells and cause defective protein synthesis.

ONSET, PEAK, DURATION

Onset and duration unknown. Serum levels peak 1 to 2 hours after oral dose.

INDICATIONS & DOSAGE

Severe fungal infections caused by susceptible strains of Candida (including septicemia, endocarditis, urinary 0

tract and pulmonary infections) and Cryptococcus (meningitis, pulmonary infection, and possible urinary tract infection)-

Adults and children weighing more than 50 kg/or more: 50 to 150 mg/kg daily P.O. in four equally divided doses q 6 hours**.**

Adults and children under 50 kg: 1.5 to 4.5 g/m^2 day P.O. in four divided doses.

ADVERSE REACTIONS

CNS: headache, vertigo, sedation, fatigue, weakness, confusion, hallucinations, psychosis, ataxia, hearing loss, paresthesia, parkmsonism, peripheral neuropathy.

CV: cardiac arrest.

GI: nausea, vomiting, diarrhea, abdominal pain, emesis, dry mouth, duodenal ulcer, **hemorrhage,** ulcerative colitis.

GU: azotemia, elevated creatinine and BUN levels, crystalluria, **renal failure.**

Hematologic: anemia, **leukopenia, bone marrow suppression, thrombocytopenia**, eosinophilia, **agranulocytosis, aplastic anemia.**

Hepatic: elevated liver enzymes, elevated serum alkaline phosphatase, and jaundice.

Respiratory: respiratory arrest, chest pain, dyspnea.

Skin: occasional rash, pruritus, urticaria, photosensitivity.

Other: hypoglycemia, hypokalemia.

INTERACTIONS

Amphotericin B: synergistic effects and possibly enhanced toxicity when used together. Monitor closely.

EFFECTS ON DIAGNOSTIC TESTS

Flucytosine causes falsely elevated creatinine values on iminohydrolase enzymatic assay the drug may increase alkaline phosphatase, AST, ALT, BUN, and serum creatinine levels and may decrease WBC, RBC, and platelet counts.

CONTRAINDICATIONS

Contraindicated in patients with hypersensitivity to the drug.

NURSING CONSIDERATIONS

- Use with extreme caution in patients with impaired hepatic or renal function or bone marrow suppression.
- Obtain hematologic tests and renal and liver function studies, as ordered. Ensure that susceptibility tests establishing that organism is flu cytosine-sensitive are on the chart.
- Administer capsules over 15 minutes to reduce adverse GI reactions.

- Monitor blood, liver and renal function studies frequently during therapy; obtain susceptibility tests weekly, as ordered, to monitor drug resistance.
- Monitor fluid intake and output; report any marked change.
- If possible, regularly perform blood level assays of drug, as ordered, to maintain flucytosine at therapeutic level (25 to 120 mcg/ml). Higher blood levels may be toxic.

PATIENT TEACHING

- Inform the patient that therapeutic response may take weeks or months.
-Instruct the patient to report adverse reactions promptly.

NOTES

1. to penetrate – ёриб кирмоқ – проникать
2. hearing loss – эшитиш қобилиятини йўқотиш – потеря слуха
3. duodenal ulcer – 12 бармоқли ичак яраси – язва 12-перстной кишки
4. chest pain – кўкракдаги оғриқ – боль в груди
5. bone marrow suppression – илик суяги жароҳати – подавленное состояние костного мозга

KETOCONAZOLE

Nizoral

Pregnancy Risk Category: C

HOW SUPPLIED

Tablets: 200 mg

Oral suspension: 100 mg/5 ml

ACTION

Inhibits purine transport and DNA, RNA, and protein synthesis; increases cell-wall permeability, making the fungus more susceptible to osmotic pressure.

ONSET, PEAK, DURATION

Onset and duration unknown. Serum levels peak 1 to 2 hours after oral dose.

INDICATIONS & DOSAGE

Systemic candidiasis, chronic mucocandidiasis, oral thrush, candiduria, coccidioidomycosis, liistoplasmosis, chromomycosis, and paracoccidioidomycosis; severe cutaneous dermatophyte injections resistant to therapy with topical or oral griseofulvin-

Adults and children over 40 kg: initially, 200 mg P.O. daily in a single doses. Dosage may be increased to 400 mg once daily in patients who don't respond to lower dosage.

Children 2 years and over: 3.3 to 6.6 mg/kg P.O. daily as a single dose.

ADVERSE REACTIONS

CNS: headache, nervousness, dizziness, somnolence, photophobia, **suicidal tendencies,** severe depression.

Gl: *nausea, vomiting,* abdominal pain, diarrhea.

Hematologic: *thrombocytopenia,* hemolytic anemia, leukopenia.

Hepatic: elevated liver enzymes or **fatal hepatotoxicity.**

Skin: pruritus.

Other: gynecomastia with tenderness, fever, chills, impotence.

INTERACTIONS

Antacids, anticholinergics, H_2 blockers: decreased absorption of ketoconazole.Wait at least 2 hours after ketoconazole dose before administering these drugs. *Astemizole, terfenadine:* may increase plasma levels of these drugs, precipitating CV events. Monitor closely. *Cisapride:* may cause ventricular arrhythmias. Avoid concomitant use.*Rifampin, isoniazid:* increased ketoconazole metabolism. Monitor for decreased antifungal effect.

EFFECTS ON DIAGNOSTIC TESTS

Ketoconazole has been reported to cause transient elevations of AST, ALT, and alkaline phosphatase levels. It has also been reported to cause transient alterations of serum cholesterol and triglyceride levels.

CONTRAINDICATIONS

Contraindicated in patients with hypersensitivity to the drug and in those taking terfenadine or astemizole.

NURSING CONSIDERATIONS

- Use cautiously in patients with hepatic disease and in those who are taking other hepatotoxic drugs.
- Because of the potential for serious hepatotoxicity, be aware that ketoconazole should not be used for less serious conditions, such as fungus infections of the skin or nails.

- Monitor for elevated liver enzymes and nausea that does not subside, as well as for unusual fatigue, jaundice, dark urine, or pale stools-all signs of possible hepatotoxicity.
- Keep in mind that much larger doses (up to 800 mg/day) can be used to treat fungal meningitis and intracerebral fungal lesions.

PATiENT TEACHING

- Instruct the patient with achlorhydria to dissolve each tablet in 4 ml aqueous solution of 0.2 N hydrochloric acid, sip the mixture through a glass or plastic straw (to avoid contact with teeth), and end the procedure by drinking a glass of water because ketoconazole requires gastric acidity for dissolution and absorption.
- Make sure the patient understands that treatment should be continued until all tests indicate that active fungal infection has subsided. If drug is discontinued too soon, infection will recur. Minimum treatment for candidiasis is 7 to 14 days; for other systemic fungal infections, 6 months; for resistant dennatophyte infections, at least 4 weeks.
-Reassure patient that nausea, common early in therapy, will subside. To minimize, divide daily dosage into two doses or take it with meals.

NOTES

1. thrust – стоматит
2. cutaneous – тери - кожный
3. somnolence – ярим ҳушсизлик – полубессознательное состояние
4. nails – тирноқлар - ногти
5. lesion – жароҳат – поражение – повреждение
6. reassure – огоҳлантирмоқ – предупреждать

CHLOROQUINE HYDROCHLORIDE

Nivaquine

Pregnancy Risk Category: C

HOW SUPPLIED

Chloroquine hydrochloride

Injection: 50 mg/ml (40-mg/ml base)

Chloroquine phosphate

Tablets: 250 mg (150-mg base), 500 mg (300-mg base)

chloroquine sulfate

Tablets: 200 mg (150-mg base)

Syrup: 68 mg (50-mg base)/5 ml

ACTION

Unknown. As an antimalarial, chloroquine may bind to and alter the properties ofDNA in susceptible parasites.

ONSET, PEAK, DURATION

Onset and duration unknown. Peak levels occur 30 minutes after parentheral administration and within 1 to 3 hours after oral administration.

INDICATIONS & DOSAGE

Acute malarial attacks caused by Plasmodium vivax, P. malariae, P. ovale, *and susceptible strains of* P. falciparum.

Adults: initially, 600 mg (base) P.O., then 300 mg at 6, 24, and 48 hours. Or 160 to 200 mg (base) I.M. initially; repeated in 6 hours porn. Patient should be switched to oral therapy as soon as possible.

Children: initially, 10 mg (base)/kg P.O., then 5 mg (base)/kg at 6, 24, and 48 hours (do not exceed adult dose). Or 5 mg (base)/kg I.M. initially; repeated in 6 hours p.r.n. Do not exceed 10 mg (base)/kg/24 hours. Patient should be switched to oral therapy as soon as possible.

Malaria prophylaxis-

Adults and children: 5 mg (base)/kg P.O. (not to exceed 300 mg) weekly on the same day (begun 2 weeks before probable exposure and continued for 4 to 6 weeks after leaving endemic area). If treatment begins after exposure, the initial dose is doubled (10 mg/kg) in two divided doses P.O. 6 hours apart.

Extraintestinal amebiasis-

Adults: 1 g (600-mg base) chloroquine phosphate P.O. daily for 2 days; then 500 mg (300-mg base) daily for 2 to 3 weeks. Treatment is usually combined with an intestinal amebicide.

Children: 16.7 mg/kg chloroquine phosphate (10 mg/kg base) P.O. once daily for 2 to 3 weeks. Maximum dosage is 500 mg chloroquine phosphate (300-mg base) daily.

ADVERSE REACTIONS

CNS: mild and transient headache, psychic stimulation, **seizures,** dizziness, neuropathy.

CV: hypotension, ECG changes.

EENT: visual disturbances (blurred vision; difficulty in focusing; reversible coma changes; typically irreversible, sometimes progressive or delayed retinal changes, such as narrowing of arterioles; macular lesions; pallor of optic disk; optic atrophy; patchy retinal pigmentation, typically leading to blindness), ototoxicity (nerve deafness, vertigo, tinnitus).

GI: anorexia, abdominal cramps, diarrhea, nausea, vomiting, stomatitis.

Hematologic: agranulocytosis, aplastic anemia, hemolytic anemia, **thrombocytopenia.**

Skin: pruritus, lichen planus eruptions, skin and mucosal pigmentary changes, leomorphic skin eruptions.

INTERACTIONS

Cimetidine: decreased hepatic metabolism of chloroquine. Monitor for toxicity.

Magnesium and aluminum salts, kaolin: decreased GI absorption. Separate administration times.

EFFECTS ON DIAGNOSTIC TESTS

Chloroquine may cause inversion or depression of the T wave or widening of the QRS complex on ECG. Rarely, it may cause decreased WBC, RBC, or platelet counts.

CONTRAINDICATIONS

Contraindicated in patients with hypersensitivity to the drug and in those with retinal or visual field changes or porphyria.

NURSING CONSIDERATIONS

-Use with extreme caution in patients with severe GI, neurological, or blood disorders.

- Use cautiously in patients with hepatic disease or alcoholism because drug concentrates in liver, and in those with G6PD deficiency or psoriasis because drug may exacerbate these conditions.

- Ensure baseline and periodic ophthalmic examinations are performed. Check periodically for ocular muscle weakness after long-term use.

- Assist patient with obtaining audiometric examinations before, during, and after therapy, especially if long-term.

- Monitor CBCs and liver function studies periodically during long-term therapy as ordered; if a severe blood disorder not attributable to the disease develops, drug may need to be discontinued.

Alert: Monitor the patient for possible overdose, which can quickly lead to toxic symptoms: headache, drowsiness, visual disturbances, cardiovascular collapse, and seizures, followed by cardiopulmonary arrest. Children are extremely susceptible to toxicity; avoid long-term treatment.

PATIENT TEACHING

-To enhance compliance for prophylaxis, advise me patient to take drug immediately before or after meals on same day each week.

- Instruct the patient to avoid excessive sun exposure to prevent exacerbation of drug-induced dermatoses.

- Tell the patient to report adverse reactions promptly, especially blurred vision, increased sensitivity to light, or muscle weakness.

NOTES

1. visual disturbances – кўриш қобилиятининг бузилиши – расстройство зрения
2. pallor – рангпар – бледный
3. tinnitus – қулоқдаги шовқин – шум в ушах
4. exacerbate – қўзғатмоқ, кучайтирмоқ

PRIMAQUINE PHOSPHATE

Pregnancy Risk Category: C

HOW SUPPLIED

Tablets: 7.5 mg (base), 15 mg (base)

ACTION

Unknown. It may be effective because of the drug's ability to bind to and alter the properties of DNA.

ONSET, PEAK, DURATION

Onset and duration unknown. Plasma levels peak in, 2 to 3 hours.

INDICATIONS & DOSAGE

Radical cure of relapsing Plasmodium vivax *malaria, eliminating symptoms and infection completely; prevention of relapse-*

Adults: 15 mg (base) P.O. daily for 14 days. (A 26.3-mg tablet provides 15 mg of base.)

Children: 0.5 mg/kg/day (0.3 mg base/kg/day; maximum 15 mg base/dose) P.O. for 14 days.

ADVERSE REACTIONS

GI: nausea, vomiting, epigastric distress, abdominal cramps.

Hematologic: leukopenia, **hemolytic anemia in G6PD deficiency**, methemoglobinemia in NADH methemoglobin reductase deficiency.

INTERACTIONS

Magnesium and aluminum salts: decreased GI absorption. Separate administration times.

Quinacrine: enhanced toxicity of primaquine. Don't use together.

EFFECTS ON DIAGNOSTIC TESTS

Decreases or increases in WBC counts and decreases in RBC counts may occur during primaquine therapy. Methemoglobinemia may occur.

CONTRAINDICATIONS

Contraindicated in patients with systemic diseases in which agranulocytosis may develop (such as lupus erythematosus or rheumatoid arthritis) and in those taking bone marrow suppressants and potentially hemolytic drugs.

NURSING CONSIDERATIONS

-Use cautiously in patients with previous idiosyncratic reaction (manifested by hemolytic anemia, methemoglobinemia, or leukopenia); in those with a family or personal history offavism; and in those with erythrocytic G6PD deficiency or NADH methemoglobin reductase deficiency.

-Administer drug with meals.

- Keep in mind that when administering the drug, a fast-acting antimalarial (such as chloroquine) is used to reduce possibility of drug-resistant strains.

- Obtain frequent blood studies and urine examinations as ordered in light-skinned patients taking more than 30 mg (base) daily, dark-skinned patients taking more than 15 mg (base) daily, and patients with severe anemia or suspected sensitivity.

- Monitor patient for sudden fall in hemoglobin concentration, erythrocyte or leukocyte count, or marked darkening of the urine, which suggests impending hemolytic reactions. Discontinue drug immediately and notify the doctor.

PATIENT TEACHING

-Instruct patient to take drug with meals to minimize stomach upset. If stomach upset (nausea, vomiting, or stomach pain) persists, tell patient to notify doctor.

- Tell patient to stop drug therapy and notify doctor immediately if marked darkening of urine occurs.
- Stress to patient the importance of completing full course of therapy.

NOTES

1. light skinned – оқ тери ранги - светлокожий
2. stomach – ошқозон – желудок
3. vomiting – қусиш – рвота

PYRIMETHAMINE

Daraprim

pyrimethamine with sulfadoxine

Pregnancy Risk Category: C

HOW SUPPLIED

pyrimethamine

Tablets: 25 mg

pyrimethamine with sulfadoxine

Tablets: pyrimethamine 25 mg, sulfadoxine 500 mg

ACTION

Inhibits the enzyme dihydrofolate reductase, thereby impeding reduction of dihydrofolic acid to tetrahydrofolic acid. Sulfadoxine competitively inhibits use of PABA.

ONSET, PEAK, DURATION

Onset and duration unknown. When administered alone, pyrimethamine serum levels peak 2 to 6 hours after oral dose. When given as the combination product, serum pyrimethamine levels peak 1 ½ to 8 hours and suliadoxine levels peak 2 ½ to 6 hours after oral dose.

INDICATIONS & DOSAGE

Malaria prophylaxis and transmission control (pyrimethamine)-

Adults and children 10 years and older: 25 mg P.O. weekly.

Children 4 to 10 years: 12.5 mg P.O. weekly.

Children under 4 years: 6.25 mg P.O. weekly. Needs to be continued in all age groups 6 to 10 weeks after leaving endemic areas.

Acute attacks of malaria (Fansidar)-

Adults and children 14 years and older: 2 to 3 tablets as a single dose, either alone or in sequence with quinine or primaquine.

Children 9 to 14 years: 2 tablets.

Children 4 to 8 years: 1 tablet.

Children under 4 years: ¾ tablet.

Malaria prophylaxis (Fansidar)-

Adults and children 14 years and older: 1 tablet weekly or 2 tablets q 2 weeks.

Children 9 to 14 years: ¾ tablet weekly or 1 ½ tablets q 2 weeks.

Children 4 to 8 years: ½ tablet weekly or 1 tablet q 2 weeks.

Children less than 4 years: ¼ tablet weekly, or ½ tablet q 2 weeks.

Acute attacks of malaria (pyrimethamine)-

Adults and children 15 years and older: 25 mg P.O. daily for 2 days.

Children under 15 years: 12.5 mg P.O. daily for 2 days.Not recommended alone in nonimmune patients; should be used with faster-acting antimalarials, such as chloroquine, for 2 days to initiate transmission control and suppressive cure.

Toxoplasmosis (pyrimethamine)-

Adults: initially, 100 mg P.O., then 25 mg P.O. daily for 4 to 5 weeks; at the same time, 1 g sulfadiazine is given P.O. q 6 hours.

Children: initially, 1 mg/kg P.O. (not to exceed 100 mg) in two equally divided doses for 2 to 4 days, then 0.5 mg/kg daily for 4 weeks, along with 100 mg sulfadiazine/kg P.O. daily, divided q 6 hours.

ADVERSE REACTIONS

GI: anorexia, vomiting, atrophic glossitis.

Hematologic: agranulocytosis, aplastic anemia, megaloblastic anemia, leukopenia, **thrombocytopenia, pancytopenia.**

Note: Adverse drug reactions related to sulfadiazine are similar to sulfonamides.

INTERACTIONS

Folic acid, PABA: decreased antitoxoplasmic effects. May require dosage adjustment.

Sulfonamides, co-trimoxazole, methotrexate: increased risk of bone marrow suppression. Don't use together.

EFFECTS ON DIAGNOSTIC TESTS

Pyrimethamine therapy may decrease WBC, RBC, and platelet counts.

CONTRAINDICATIONS

Pyrimethamine is contraindicated in patients with hypersensitivity to the drug and in patients with megaloblastic anemia caused by folic acid deficiency. Fansidar is contraindicated in patients with porphyria.Repeated use of Fansidar is contraindicated in patients with severe renal insufficiency, marked liver parenchymal damage or blood dyscrasias, known hypersensitivity to pyrimethamine or sulfonamides, documented megaloblastic anemia due to foliate deficiency; in infants under 2 months; in pregnancy at term; and during breast-feeding.

NURSING CONSIDERATIONS

- Use cautiously m patients with impaired hepatic or renal function, severe allergy or bronchial asthma, G6PD deficiency, or seizure disorders (smaller doses may be needed) and after treatment with chloroquine.
- Obtain twice-weekly blood counts, including platelets, as ordered, for the patient with toxoplasmosis because dosages used approach toxic levels. If signs of folic acid or folinic acid deficiency develop, dosage should be reduced or discontinued while the patient receives parentheral folinic acid (leucovorin) until blood counts become normal.
- -Keep in mind that, when used to treat toxoplasmosis in patients with AIDS, therapy may be life long.
- -Know that Fansidar should be used only in areas where chloroquine-resistant malaria is prevalent and only if the traveler plans to stay longer than 3 weeks.

PATIENT TEACHING

-Tell patient to take drug with meals.

-Inform the patient with toxoplasmosis of the importance of frequent laboratory studies and compliance with therapy. Tell the patient of potential need for long-term therapy.

-Warm the patient taking Fansidar to stop drug and notify doctor at first sign of rash.

-Tell him to take first prophylactic dose 1 to 2 days before traveling.

NOTES

1. suppressive cure – секинлаштирувчи даво – подавляющее лечение
2. dosage adjustment – доза тартиби – регулирование дозы
3. breast-feeding – эмизиш – грудное вскармливание
4. prevalent – кенг тарқалган - распространенный
5. notify – хабар бермоқ - сообщить

CAPREOMYCIN SULFATE

Capastat Sulfate
Pregnancy Risk Category: C

HOW SUPPLIED

Injection: 1 g/vial

ACTION

Unknown.

ONSET, PEAK, DURATION

Onset and duration unknown. Plasma levels peak 1 to 2 hours after I.M. injection.

INDICATIONS & DOSAGE

Adjunctive treatment of tuberculosis-

Adults: 15 mg/kg/day up to 1 g I.M. daily injected deeply into large muscle mass for 60 to 120 days; then 1 g two to three times weekly for 18 to 24 months. Maximum dosage should not exceed 20 mg/kg/day. Must be given in conjunction with another antitubercular.

ADVERSE REACTIONS

EENT: *ototoxicity*, tinnitus, vertigo, hearing loss.
GU: nephrotoxicity (elevated BUN).
Hematologic: eosinophilia, leukocytosis, leukopenia, **thrombocytopenia.**
Other: hypersensitivity reactions (with concomitant use of other antituberculars); urticaria; maculopapular rashes; hepatotoxicity; pain, induration, excessive bleeding, and sterile abscesses at injection site; hypokalemia.

INTERACTIONS

Nephrotoxic or ototoxic drugs such as aminoglycosides, colistin, polymyxin B, or vancomycin: increased risk of additive toxicity. Avoid concomitant use. *Nondepolarizing neuromuscular blockers:* Neuromuscular blockade may be enhanced by concurrent capreomyein due to a synergistic effect on myoneural function. Monitor closely.

EFFECTS ON DIAGNOSTIC TESTS

The drug's physiologic effects may decrease sulfobromophthalein (BSP) excretion. Capreomycin-induced nephrotoxicity may elevate BUN and serum creatinine levels, and increase urinary WBCs, RBCs, casts, and protein.

CONTRAINDICATIONS

Contraindicated in patients with hypersensitivity to the drug.

NURSING CONSIDERATIONS

- Use with extreme caution in patients receiving other ototoxic or nephrotoxic drugs.
-Use cautiously in patients with impaired renal function, history of allergies, or hearing impairment.
- Assess patient's hearing before beginning therapy. Evaluate patient's hearing every 1 to 2 weeks afterward. Notify the doctor if the patient complains of tinnitus, vertigo, or hearing impairment.
- Assess patient's renal function before beginning therapy. Monitor renal function during therapy; notify the doctor if function diminishes. In renal impairment, dosage must be reduced.
-Be aware that capreomycin is considered a "second-line" drug in the treatment of tuberculosis and should always be administered with other antituberculars to prevent the development of resistant organisms.
- To prepare solution, add 2 ml of 0.9% sodium chloride or sterile water for injection to powder to obtain a 1-g dose; add 2.15 ml for a 350 mg/ml concentration; 2.63 ml for a 300

mg/ml concentration; 3.3 ml for a 250 mg/ml concentration; and 4.3 ml for a 200 nig/ml concentration. Wait 2 to 3 minutes for complete dissolution.

-Be aware that straw- or dark-colored solution after reconstitution does not indicate a loss in potency. Do not administer solutions that contain a precipitate.

Alert: Give deep I.M to minimize local reactions. Apply ice to injection site p.r.n. for pain. Know that drug is never given I.V. because this route may cause neuromuscular blockade.

- Monitor serum potassium levels regularly as ordered.

PATIENT TEACHING

-Instruct a family member or friend how to prepare drug and administer an I.M. injection. Tell them not to use any solution that contains a precipitate. However, reassure them that straw- or dark-colored solution may be used.

- Warn the patient that injection may be painful, and suggest applying ice to injection site p.r.n. for pain.
- Instruct the patient to report adverse reactions promptly.
- Stress the importance of recommended laboratory tests to monitor for adverse reactions.

NOTES

1. induration – қотиш – затвердение
2. bleeding – қон кетиш – кровотечение
3. concomitant use – биргаликда қўллаш – сопутствующее применение
4. urticaria – эшакеми – крапивница
5. hypersensitivity – юқори сезгирлик – высокая чувствительность
6. potency – таъсирчанлик - действенность

ACCRETROPIN
(SOMATROPIN RDNA ORIGINAL)

Company: Cangene Corp
Approval Status: Approved January 2008
Treatment for: growth failure in pediatrics
Areas: Diabetes / Endocrinology; Pediatrics

General Information

Accretropin is a sustained release formulation of recombinant human growth hormone product. This protein is produced by recombinant DNA technology during fermentation in E. coli, yielding a protein containing 192 amino acids. The N-terminal amino acid, methionine, is later removed to yield a protein that is chemically and physic chemically identical to pituitary derived human growth hormone, consisting of 191 amino acids in a single polypeptide chain.

Accretropin is specifically indicated for the treatment of pediatric patients who have growth failure due to an inadequate secretion of normal endogenous growth hormone and for the treatment of short stature associated with Turner Syndrome in pediatric patients whose epiphyses are not closed.

Accretropin is supplied as a solution designed for subcutaneous administration. The recommended in itial dose of the drug is as follows:

Growth Hormone Deficiency

The recommended weekly dose is 0.18 mg/kg body weight to 0.3 mg/kg (0.90 IU/kg) body weight. The dose should be divided into equal daily doses given 6 or 7 times per week subcutaneously.

Turner Syndrome

The recommended weekly dose is 0.36 mg/kg of body weight. The dose should be divided into equal daily doses given 6 or 7 times per week subcutaneously.

Failure of Accretropin to increase growth rate, particularly during the first year of therapy, should prompt assessment of compliance and evaluation of other causes of growth failure such as hypothyroidism, under-nutrition and advanced bone age.

Growth Hormone Deficiency

This single-arm, open-label, multicenter trial enrolled 44 pediatric subjects who were treated for up to 3 years with an Accretropin dose of 0.03 to 0.05 mg/kg/day (0.18 to 0.30 mg/kg/week) subcutaneously. Height SD score calculated relative to population of normally growing children increased on Accretropin treatment from -3.04 at baseline to -2.46 at one year, -2.12 at two years, and -1.78 at three years.

Turner Syndrome

This single-arm, open-label, single-center trial enrolled 37 subjects who received an Accretropin dose of 0.06 mg/kg/day subcutaneously (0.36 mg/kg/week). Height SD score calculated relative to population of Turner Syndrome patients increased on Accretropin treatment from -3.17 at baseline to -2.67 at one year, -2.43 at two years, and -2.28 at three years.

Side Effects

Adverse events associated with the use of Accretropin for growth hormone deficiency may include, but are not limited to, the following:

- injection site reactions
- nausea
- headache

- fatigue
- scoliosis

Adverse events associated with the use of Accretropin for Turner Syndrome may include, but are not limited to, the following:

- injection site reactions, including erythema, edema, pain, pruritis

Mechanism of Action

Accretropin is a sustained release formulation of recombinant human growth hormone product. This protein is produced by recombinant DNA technology during fermentation in E. coli, yielding a protein containing 192 amino acids. The N-terminal amino acid, methionine, is later removed to yield a protein that is chemically and physic chemically identical to pituitary derived human growth hormone, consisting of 191 amino acids in a single polypeptide chain.

NOTES

1. growth failure – ўсишнинг секинлашуви – задержка роста
2. pituitary – шиллиқ – слизистый
3. subcutaneous administration – тери остига юбориш – подкожное применение
4. assessment of compliance – розилик олиш – получить согласие
5. under nutrition – озуқа етишмовчилиги – нехватка питания
6. single arm – бир марталик – одноразовый
7. open-label – очиқ кўрсатмали - безуказательный
8. multicenter – кўп мақсадли - многоцелевой

BENZAMYCIN
(Erythromycin 3%-benzoyl peroxide 5% topical gel)

Company: Dermik Laboratories
Approval Status: Approved November 2000
Treatment for: Acne vulgaris

Benzamycin is a combination of two active ingredients, benzoic peroxide and erythromycin, which has proven effective in stopping acne-causing bacteria and reducing acne infection. Erythromycin is an antibiotic produced from a strain of *Saccharopolyspora erythraea*, whereas benzoic peroxide is an antibacterial and keratolytic agent (causes the break down of keratin).

The term "acne vulgaris" refers to the more common form of acne, consisting of non-inflammatory and mildly inflammatory lesions. The more severe form of acne is characterized by the presence of nodules. Nearly 17 million people in the United States have acne, making it the most common skin disease. Although acne is not a serious health threat, severe acne can lead to disfiguring, permanent scarring, which can be upsetting for people who suffer from the disorder.

Side Effects

Adverse reactions reported occasionally or associated with the use of Benzamycin Topical Gel include the following:

- Dryness
- Urticarial reaction (hives, itching)
- Peeling
- Burning sensation
- Inflammation of the face, eyes, and nose
- Skin discoloration
- Oiliness
- Tenderness of the skin

Mechanism of Action

Erythromycin inhibits protein synthesis in susceptible organisms by reversibly binding to 50 S ribosomal subunits, thereby inhibiting translocation of aminoacyl transfer-RNA and inhibiting polypeptide synthesis. Antagonism has been demonstrated in vitro between erythromycin, lincomycin, chloramphenicol, and clindamycin.

The exact mechanism by which erythromcyin reduces lesions of acne vulgaris is not fully known; however, the effect appears to be due in part to the antibacterial activity of the drug. Benzoyl peroxide has a keratolytic and desquamative effect which may also contribute to its efficacy. Benzoyl peroxide has been shown to be absorbed by the skin where it is converted to benzoic acid.

NOTES

1. acne infection – ҳуснбузар инфекцияси – инфекция угрей
2. non-inflammatory – яллиғланишсиз – без воспаления
3. nodules – тугунлар - узелки
4. disfiguring – ўсишдаги сезиларли етишмовчилик -
5. permanent scarring – яранинг узоқ вақт битиши – долговременное рубцевание
6. peeling – терининг пўст ташлаши – отшелушивание кожи

7. oiliness – ёғлилик - жирность
8. tenderness of the skin – терининг юпқалашуви – истончение кожи

CEFAZOLIN AND DEXTROSE USP

Company: B Braun Medical
Approval Status: Approved July 2000
Treatment for: Various bacterial infections, septicemia, endocarditis, and preoperative prophylaxis
Areas: Dermatology / Plastic Surgery; Immune System; Urology & Kidneys; Respiratory

General Information

Cefazolin and Dextrose USP, for injection, has recently been approved using the Duplex drug delivery system, for the treatment of various bacterial infections. The multiple indications for this combination therapy include, but are not limited to respiratory tract infections, urinary tract infections, skin and skin structure infections, biliary tract infections, bone and joint infections, genital infections, septicemia (bloodstream infections), endocarditis (inflammatory disorder of the heart valves), and preoperative prophylaxis.
The administration of Cefazolin and Dextrose preoperatively, intraoperatively and postoperatively to patients undergoing high risk surgeries, such as a vaginal hysterectomy or to older patients at high risk of infection due to a compromised immune system, may decrease the occurrence of certain postoperative infections.

Results

In vitro tests have shown that the antibacterial action of Cefazolin is caused by the drug's inhibition of cell wall synthesis, therefore reducing bacterial cell growth. Studies have also shown that in patients hospitalized with infection, Cefazolin administered intravenously has produced the same blood serum levels seen in healthy volunteers.

Side Effects

Common side effects of Cefazolin and Dextrose for injection include, but are not limited to:
Gastrointestional reactions, including:

- Diarrhea
- Oral candidiasis
- Stomach cramps
- Anorexia

Allergic reactions, including:

- Anaphylaxis
- Eosinophilia
- Itching
- Drug fever
- Skin rash
- Stevens-Johnson Syndrome

Hematologic reactions, including:

- Neutropenia
- Leukopenia
- Thrombocytopenia
- Thrombocythemia

Some cases of Interstitial nephritis and other renal disorders have been reported rarely. In clinical trials, patients who experienced these side effects were seriously ill and were receiving multiple drug therapies. Transient hepatitis and cholestatic jaundice are also uncommon side effects associated with penicillin and cephalosporins.
Other rare side effects include genital and anal pruritis and rare instances of phlebitis at the site of injection.
Cefazolin and Dextrose injection is contraindicated for patients:

- with known allergies to the cephalosporin group of antibiotics
- with hypersensitivity to corn products
- currently taking probenecid

Serious or fatal hypersensitivity has been reported in patients on penicillin therapy. Anaphalactic reactions are more likely to occur in patients that have a known history of sensitivity to multiple allergens.
Pseudomembranous colitis has also been reported and may range in severity from mild to life-threatening.

Mechanism of Action

Cefazolin for Injection USP and Dextrose Injection USP is a sterile, non-pyrogenic (does not induce fever), single use, packaged combination of Cefazolin Sodium USP (lyophilized) and sterile iso-osmotic diluting in the DUPLEX sterile container. (From FDA Label) It is administered through parentheral injection or intramuscular injection.

Additional Information

While using Cefazoline USP and Dextrose USP diabetics may get a false-positive result when testing for sugar in their urine. Check with your doctor or a healthcare professional before changing your diet or your diabetic medication.
Pregnant women using Cefazoline USP and Dextrose USP should know that while the drug has not been shown to have harmful effects on the fetus, no adequate or conclusive studies have been done on Cefazoline use in pregnant women. The drug is present in trace amounts in the milk of nursing mothers. Nursing mothers should only use this drug when it is clearly necessary and prescribed by a physician.

NOTES

1. urinary tract infections – сийдик йўллари инфекциялари – инфекции мочеполовой системы
2. biliary tract infections – ўт йўллари инфекциялари – инфекции желчевыводящих путей
3. cell growth – ҳужайралар ўсиши – рост клеток
4. volunteers – кўнгиллилар - добровольцы
5. life-threatening – ҳаёт учун хавфли – опасность для жизни
6. fetus – ҳомила – плод
7. nursing mothers – эмизикли оналар – кормящие матери

DOSTINEX TABLETS
(cabergoline tablets)

Company: Pharmacia & Upjohn
Approval Status: Approved January 1997
Treatment for: hyperprolactinemic disorders
Areas: Diabetes / Endocrinology

General Information

Dostinex has been approved for the treatment of hyperprolactinemic disorders, either idiopathic or due to pituitary adenomas (tumors).

Clinical Results

In a clinical trial involving approximately 450 subjects, Dostinex was compared with bromocriptine in treating hyperporlactinemia. In the eight-week, double blind trial, prolactin levels returned to normal in 77% of subjects treated with Dostinex (0.5mg twice weekly) compared to 59% of those treated with bromocriptine (2.5 mg twice-daily). Restoration of menses occurred in 77% of women treated with Dostinex, compared to 70% of those treated with bromocriptine.

Among subjects with galactorrhea (excessive breast milk discharge), the symptom disappeared in 73% of those treated with Dostinex, compared to 56% of 231 subjects taking bromocriptine.

Side Effects

Clinical studies also showed the safety profile of Dostinex compares favorably to bromocriptine. Two percent of 221 subjects taking Dostinex discontinued treatment due to side effects during the eight-week study, versus six percent of 231 subjects taking bromocriptine.

Nausea is the most common side effect of both drugs. During the eight-week, double-blinded portion of the trial, 29% of subjects experienced nausea with Dostinex compared with 43% of those taking bromocriptine.

Dostinex is contraindicated in subjects with uncontrolled hypertension or known hypersensitivity to ergot derivatives.

Additional Information

Hyperprolactinemia is usually caused by a benign tumor on the pituitary gland that results in excess production of prolactin, the hormone that controls lactation. Doctors treat from 70,000 to 100,000 patients with the condition each year, the vast majority of whom are women. It most commonly affects women between the ages of 20 to 50 and can cause cessation of menstruation, excessive milk discharge and infertility. In men, the condition can cause decreased libido and impotence.

NOTES

1. tumors – ўсимталар - опухоли
2. ergot derivatives – шоҳкуя ҳосилалари – производные спорыньи
3. cessation – тўхташ - прекращение
4. infertility – пуштсизлик - бесплодие

DUEXIS
(Ibuprofen and famotidine)

Company: Horizon Pharma
Approval Status: Approved April 2011
Treatment for: relief of rheumatoid arthritis and osteoarthritis and prevention of gastric ulcers
Areas: Gastrointestinal; Musculoskeletal; Rheumatology

General Information

Duexis is a proprietary formulation of the non-steroidal anti-inflammatory drug (NSAID) ibuprofen, combined with the potent H2 receptor antagonist famotidine, in a single pill. It was formulated to provide pain relief while reducing stomach acidity during the peak time of risk for ulceration.

Duexis is specifically indicated for the relief of signs and symptoms of rheumatoid arthritis and osteoarthritis and to decrease the risk of developing upper gastrointestinal ulcers in patients who are taking ibuprofen for those indications.

Duexis is supplied as a tablet for oral administration. The recommended dose is 800 mg/26.6 mg ((ibuprofen/famotidine) as a single tablet administered orally three times per day. The tablets should be swallowed whole, and should not be cut to supply a lower dose.

Clinical Results

FDA Approval

The FDA approval of Duexis was based on two multicenter, double-blind, active-controlled, randomized 24-week studies (Studies 301 and 303). A total of 1533 subjects were enrolled; all subjects were expected to require daily administration of an NSAID for at least the coming six months for conditions such as the following: osteoarthritis, rheumatoid arthritis, chronic low back pain, chronic regional pain syndrome, and chronic soft tissue pain. The subjects received either Duexis or ibuprofen (800 mg) three times a day for 24 consecutive weeks. In both trials, Duexis was associated with a statistically significantly reduction in the risk of developing upper gastrointestinal ulcers compared to taking ibuprofen only during the six month study period. Two analyses for each endpoint were conducted. In analysis one, patients who terminated early, without an endoscopic evaluation within 14 days of their last dose of study drug, were classified as not having an ulcer. In analysis two, those patients were classified as having an ulcer. Efficacy was based on the overall incidence rates of subjects who developed at least one upper gastrointestinal ulcer (primary endpoint) or gastric ulcer (secondary endpoint). The results are as follows:

Study 301

Primary endpoint: Analysis 1: Duexis- 10.5% vs. Ibuprofen - 20.0% (p0.002); Analysis 2: Duexis- 22.9% vs. Ibuprofen 32.1% (p0.020). Secondary endpoint: Analysis 1: Duexis- 9.7% vs. Ibuprofen - 17.9% (0.005); Analysis 2: Duexis- 22.4% vs. Ibuprofen 30.0% (p0.052).

Study 303

Primary endpoint: Analysis 1: Duexis- 8.7% vs. Ibuprofen - 17.6% (p0.0004); Analysis 2: Duexis- 17.4% vs. Ibuprofen- 31.0% (p<0.0001). Secondary endpoint: Analysis 1: Duexis- 10.1% vs. Ibuprofen - 21.3% (p<0.0001); Analysis 2: Duexis- 18.6% vs. Ibuprofen 34.3% (<0.0001).

Side Effects

Adverse events associated with the use of Duexis may include, but are not limited to, the following:

- nausea
- diarrhea
- constipation
- upper abdominal pain
- headache

Mechanism of Action

Duexis is a proprietary formulation of the non-steroidal anti-inflammatory drug (NSAID) ibuprofen, combined with the potent H2 receptor antagonist famotidine, in a single pill. It was formulated to provide pain relief while reducing stomach acidity during the peak time of risk for ulceration. Ibuprofen possesses analgesic and antipyretic activities. Its mode of action, like that of other NSAIDs, is not completely understood, but may be related to prostaglandin synthetase inhibition. Famotidine is a competitive inhibitor of histamine H2-receptors. The primary clinically important pharmacologic activity of famotidine is inhibition of gastric secretion.

NOTES

1. pain relief – оғриқ белгиси - характер боли
2. stomach acidity – ошқозон шираси – желудочная кислотность
3. be swallowed whole – бутунлигича ютиш – глотать целиком
4. lower dose – майда доза – мелкая доза
5. soft tissue – юмшоқ тўқима – мягкая ткань
6. endoscopic evaluation – ошқозон йўллари текшируви – осмотр желудочно-кишечного тракта
7. endpoint – чегара – граница
8. constipation – қабзият – запор
9. gastric secretion – ошқозонда шира ажралиши – желудочная секреция

KALETRA
Capsules and Oral Solution

Company: Abbott Laboratories

Treatment for: For the treatment of HIV-1 infection in adults and pediatric patients age six months and older

Areas: Immune System

General Information

Kaletra is an HIV protease inhibitor approved for the treatment of HIV-1 infection. It consists of two components: lopinavir and ritonavir. Lopinavir is an inhibitor of the HIV protease, which is a chemical necessary for HIV to multiply. Ritonavir inhibits the (CYP3A-mediated) metabolism of lopinavir, thereby increasing levels of lopinavir in the blood. The FDA has granted accelerated approval to Kaletra based on favorable results in reducing HIV viral load and on CD4 T-cell counts.

Clinical Results

Patients Who Have Not Received Prior Antiretroviral Therapy

Study 863 is an ongoing, randomized, double-blind, multicenter trial comparing treatment with Kaletra versus nelfinavir. Both products were administered with stavudine and lamivudine - two nucleoside reverse transcriptase inhibitors (NRTI) - to 653 patients new to HIV therapy. Through 24 weeks of therapy, the proportion of patients with HIV RNA <50 copies/ mL was 65% in the group receiving Kaletra, and 60% in the nelfinavir group. Additionally, the mean increase from baseline in CD4 cell count was 154 cells/ mm3 for the Kaletra group and 150 cells/ mm3 for the nelfinavir group.

Study 720 is an ongoing, randomized, blinded, multicenter trial evaluating treatment with Kaletra at three dose levels (plus lamivudine and stavudine) in 100 patients. Through 72 weeks of treatment, the proportion of patients with undetectable levels of the virus (HIV RNA <400 copies/ mL) was 80% and the mean increase from baseline in CD4 cell count was 256 cells/ mm3 for the 51 patients originally receiving a 400/ 100 mg dose of Kaletra.

Patients Who Have Received Prior Antiretroviral Therapy

Study 765 is an ongoing, randomized, blinded, multicenter trial evaluating treatment with Kaletra at two dose levels plus nevirapine and two NRTIs. The treatment group consisted of 70 patients who had not previously taken a non-nucleoside reverse transcriptase inhibitor (NNRTI) but were single protease inhibitor experienced. Through 72 weeks of treatment, the proportion of patients with HIV RNA <400 copies/ mL was 75% and the mean increase from baseline in CD4 cell count was 174 cells/ mm3 for the 36 patients receiving the 400/ 100 mg dose of Kaletra. (from FDA Label)

Side Effects

Possible side effects of Kaletra include (but are not limited to) the following:

- Abnormal bowel movements, Diarrhea, Feeling weak/ tired
- Headache
- Nausea
- Abdominal pain

Additionally, some patients taking Kaletra can develop serious problems with their pancreas. Patients should immediately inform their doctor if nausea, vomiting, or abdominal pain occurs, as these may be signs of pancreatitis.

Mechanism of Action

Lopinavir, an inhibitor of the HIV protease, prevents cleavage of the Gag-Pol polyprotein, resulting in the production of immature, non-infectious viral particles. (from FDA label)

NOTES

1. randomized – тасодифан - случайный
2. double-blind – икки карра текширилган – дважды проверенный
3. cleavage – парчаланиш - расщепление
4. production of immature – хом, етилмаган маҳсулот – продукция незрелости

SPORANOX
(Itraconazole)

Company: Janssen Pharmaceutica
Approval Status: Approved March 1997
Treatment for: oral thrush
Areas: Immune System

General Information

SPORANOX (itraconazole) Oral solution has been approved for the treatment of painful and debilitating fungal infections of the esophagus or the mouth, commonly called thrush.

Clinical Results

In clinical studies, SPORANOX Oral Solution was as effective as current front-line therapy in healing the white plaques and raw, ulcerated lesions associated with candidiasis.

Data presented at the 11th International Conference on AIDS in Vancouver in July, comparing SPORANOX Oral Solution to fluconazole tablets, a leading treatment for thrush, showed that an average of 84% of patients with oral thrush were cured or had no visible lesions after treatment with either 7 to 14 days of SPORANOX Oral Solution (200 mg/day) or fluconazole tablets (200 mg day one, followed by 100 mg for 13 days). There were 190 patients in that trial.

Similar results were found in a double-blind randomized study of 119 patients with esophageal candidiasis. An average of 86% of patients were cured or improved with 100 mg/day of either SPORANOX Oral Solution or fluconazole tablets, administered for 21 days. Only 11% of patients on SPORANOX Oral Solution and 21% of patients on fluconazole tablets required higher doses (200 mg/day).

SPORANOX Oral Solution may also be effective in treating oral candidiasis patients who were clinical fluconazole failures. Of patients who did not show clinical improvement with fluconazole tablets (minimum 200 mg/day for at least 14 days), 55% had complete resolution of oral lesions, after 200 mg/day of SPORANOX after 200mg/day of SPORANOX Oral Solution for periods of 14 to 28 days in an open-label study of 74 patients.

Side Effects

SPORANOX Oral Solution is generally well-tolerated. Gastrointestinal upset and diarrhea are the most frequently observed adverse events at 10.3%. Other side effects include fever (6.3%). Co-administration of SPORANOX Oral Solution with terfenadine, astemizole, cisapride, oral triazolam, oral midazolam, lovastatin or simvastatin is contraindicated. SPORANOX Oral Solution and SPORANOX Capsules should not be used interchangeably. SPORANOX Capsules are not indicated for treatment of oral and esophageal candidiasis.

Additional Information

Thrush affects nearly half of all HIV-positive individuals and up to 95% of patients with AIDS. Oral and esophageal candidiasis cause painful sores in the mouth or esophagus, often causing great difficulty eating or taking medication, and leading to nutritional deficits and weight loss.

NOTES

1. fungal infections – замбуруғ инфекциялари – грибковые инфекции
2. plaques – доғлар – пятна
3. well-tolerated – яхши қабул қилинади – хорошо усваиваться
4. painful sores – оғриқли яралар – болезненные язвы
5. weight loss – озиш – потеря веса

THIOPENTAL SODIUM

Thiopental is a representative intravenous anesthetic. Various drugs can serve as alternatives.

Injection (powder for solution injection), thiopental sodium, 0.5g and 1g ampoules.

Uses: indication for anaesthetic prior to administration of inhalational anesthetic; anaesthesia of short duration.

Contraindications: inability to maintain airway; hypersensitivity to barbiturates; cardiovascular disease; dyspnoea or obstructive respiratory disease; porphyria.

Precaution: local extravasation can result in extensive tissue necrosis and sloughing; intra – arterial injection causes intense pain and may result in arteriospasm; hepatic impairment; pregnancy.

Interactions: skilled tasks. Warn patient not to perform skilled tasks, for example operating machinery, driving, for 24 hours and also to avoided alcohol for 24 hours.

Dosage:

Induction, by intravenous injection as a 2.5 % (25 mg/ml) solution over 10 – 15 seconds, ADULT 100-150mg (reduced in elderly or debilitated patients), followed by a further 100-150mg if necessary according to response after 60 seconds; or up to 4 mg/kg; CHILD 2-7mg/kg repeated if necessary according to response after 60seconds.

RECONSTITUTION. Solution containing 25mg/ml should be freshly prepared by mixing 20ml of water for injections with the contents of the 0.5g ampoule or 40ml with the 1g ampoule. Any solution made up over 24 hours previously or in which cloudiness, precipitation or crystallization is evident should be discarded.

Adverse effects: rapid injection may result in severe hypotension and hiccup; cough, laryngeal spasm, allergic reactions.

NOTES

1. inhalational anesthetic – нафас йўли оғриқ қолдирувчиси – вдыхательное обезболивающее
2. respiratory disease – нафас йўли касаллиги – заболевание дыхательных путей
3. tissue necrosis – тўқима емирилиши – некроз ткани
4. cloudiness – хиралик – мутность
5. hiccup – хиқичоқ – икота

BUPIVACAIN HYDROCHLORIDE

Bupivacain is a representative local anesthetic. Various drugs can serve as alternatives.Injection (Solution for injection), bupivacain hydrochloride 2.5mg/ml (0.25%), 10-ml ampoule; 5mg/ml (0.5%), 10-ml ampoule; 5mg/ml (0.5%) with glucose 75mg / ml (7.5%), 4-ml ampoule.

Uses: infiltration anesthesia; peripheral and sympathetic nerve block; spinal anesthesia; postoperative pain relief.

Contraindication: adjacent skin infection, inflamed skin; concomitant anticoagulant therapy; severe anemia or heart disease; spinal or epidural anesthesia in dehydrated or hypovolemic patient.

Precautions: respiratory impairment; hepatic impairment; epilepsy; porphyria; myasthenia gravis; pregnancy and breastfeeding.

Dosage: Local infiltration, using 0.25% solution, ADULT up to 150mg (up to 60ml).

Peripheral nerve block, using 0.5%, ADULT up to 150mg (up to 30ml)

Dental anesthesia, using 0.5%, ADULT 9-18mg (1.8-3.6ml)

Lumbar epidural block in surgery, using 0.5% solution, ADULT 50-100mg (10-20ml)

Lumbar epidural block in labor, using 0.25-0.5% solution, ADULT(female) up to 60mg (maximum 12ml)

Caudal block in surgery, using 0.25-0.5% solution, ADULT up to 150mg (maximum 30ml)

Caudal block in labor, using 0.25-0.5% solution, ADULT(female) up to 100mg (maximum 20ml)

NOTE. Maximum cumulative safe dose for adult and children of a 0.25% solution of bupivacaine is 1.5mg/kg. Use lower doses for debilitated, elderly, epileptic, or acutely ill patients.

Don`t use solutions containing preservatives for spinal, epidural, caudal or intravenous regional anesthesia.

Adverse effects: with excessive dosage or following intravascular injection, light – headedness, dizziness, blurred vision, restlessness, tremors and, occasionally, convulsions rapidly followed by drowsiness, unconsciousness respiratory failure; cardiovascular toxicity includes hypotension, heart reactions also occur; epidural anesthesia occasionally complicated by urinary retention, faecal incontinence, head – ache, backache loss of perineal sensation, transient paraesthesia and paraplegia very rare.

NOTES

1. inflamed skin – яллиғланган тери – воспаленная кожа
2. heart disease – юрак касаллиги – заболевание сердца
3. caudal – думғаза – хвостовой
4. tremor – титроқ – дрожь
5. unconsciousness – ҳушсизлик – бессознательность
6. faecal incontinence – ахлат ушламаслик – недержание кала

DIAZEPAM

Diazepam is a representative benzodiazepine. Various drugs can serve as alternatives.

Tablets, diazepam 2mg, 5mg

Injection (Solution for injection), diazepam 5mg/ml, 2-ml ampoule

Uses: premedication before major or minor surgery; sedation with amnesia for endoscopic procedures and surgery under local anaesthesia; in combination with pethidine, when anaesthesia is not available, for emergency reduction of fractures; epilepsy anxiety disorders.

Contraindications: central nervous system depression or coma; shock; respiratory depression; acute pulmonary insufficiency; sleep apnea; acute alcohol intoxication; severe hepatic impairment; myasthenia gravis.

Precautions: respiratory disease; muscle weakness; history of alcohol or drug abuse; marked personality disorder; elderly or debilitated patients; hepatic impairment or renal failure; pregnancy and breastfeeding; porphyria.

SKILLED TASKS. Warn patient not to perform skilled tasks, for example operating machinery, driving, for 24 hours

Dosage: Premedication, *by mouth* 2 hours before surgery, ADULT and CHILD over 12 years, 5-10mg.

Sedation, *by slow intravenous injection* immediately before procedure, ADULT and CHILD over 12 years, 200 micrograms/kg.

ADMINISTRATION. Absorption following intramuscular injection slow and erratic; route should only be used if oral and intravenous administration not possible.Slow intravenous injection into large vein reduces risk of thrombophlebitis.Resuscitation equipment must be available.**Adverse effects:** central nervous system effects common and include drowsiness, sedation, confusion, amnesia, vertigo, and ataxia; hypotension, bradycardia, or cardiac arrest, particularly in elderly or severely ill patients; also paradoxical reactions, including irritability, excitability, hallucinations, sleep disturbances; pain and thromboembolism on intravenous injection.

NOTES

1. premedication – дастлабки даволаш – предварительное лечение
2. drug abuse – дорини нотўғри қўллаш – неправильное употребление лекарств
3. erratic – беқарор, чидамсиз - неустойчивый
4. resuscitation equipment – реанимация асбоблари – реанимационное оборудование
5. excitability – тез таъсирланиш - возбудимость

MORPHINE

Injection (Solution for injection), morphine (as hydrochloride or sulfate) 10mg/ml, 1-ml ampoule.

Uses: adjunct during major surgery; postoperative analgesia; pain, myocardial infection, acute pulmonary oedema.

Contraindications: acute respiratory depression; increased intracranial pressure, head injury or brain tumor; severe hepatic impairment; adrenocortical insufficiency; hypothyroidism; convulsive disorders; acute alcoholism, delirium tremens; diverticulitis and other spastic conditions of colon; recent surgery on biliary tract; diarrhea due to toxins.

Precautions: asthma, emphusema, or heart failure secondary to chronic lung disease; ability to maintain airway; if used in biliary colic, antispasmodic needed; renal impairment; pregnancy; breastfeeding.

Dosage:

Premedication, *by subcutaneous or intramuscular injection* 1 hour before surgery, ADULT 150-200 micrograms /kg; *by intramuscular injection* 1 hour before surgery, CHILD 50-100 micrograms /kg.

Intra – operative analgesia, *by intramuscular injection* ADULT and CHILD 100micrograms /kg, repeated every 40-60 minutes as required.

Postoperative analgesia *by intramuscular injection* ADULT 150-300 micrograms /kg, every 4 hours, CHILD 100-200 micrograms /kg; or *by intravenous injection* ADULT 8-10mg over 30 minutes, then 2-2.5mg/hour.

Adverse effects: respiratory depression; anorexia; nausea; vomiting; constipation; euphoria, dizziness, drowsiness, confusion, headache, dry mouth; spasm of urinary and biliary tract; circulatory depression, hypotension, bradycardia, palpitations; miosis; allergic reactions; physical dependence.

NOTES

1. delirium – босинқираш – бред
2. colon – тўғри ичак – прямая кишка
3. due to toxins – заҳарлар чақирган – вызванный токсинами
4. circulatory – айланиб турувчи - циркулирующий

IBUPROFEN

Tablets, ibuprofen 200mg, 400mg.

Uses: pain and inflammation in rheumatic disease and other musculoskeletal disorders including juvenile arthritis; mild to moderate pain including dysmenorrhea, headache; pain in children; acute migraine attack.

Contraindication: hypersensitivity (including asthma, angioedema, urticaria or rhinitis) to acetylsalicylic acid or any other NSAID; active peptic ulceration.

Precautions: renal and hepatic impairment; preferably avoid in history of peptic ulceration; cardiac disease; elderly; pregnancy and breastfeeding; coagulation defects; allergic disorders.

Dosage: Mild to moderate pain, pyrexia, inflammatory musculoskeletal disorders, by *mouth* with or after food, ADULT 1.2-1.8g daily in 3-4 divided doses. Increased if necessary to maximum dose 2.4g daily (3.2g daily in inflammatory disease); maintenance dose of 0.6-1.2g daily may be sufficient.

Juvenile arthritis, *by mouth* with or after food, CHILD over 7kg, 30-40mg /kg daily in 3-4 divided doses.

Pain in children (not recommended for child under 7 kg) *by mouth* with or after food,20-40mg/kg daily in divided doses or 1-2 years 50mg 3-4 times daily, 3-7 years 100mg 3-4 times daily, 8-12 years 200mg 3-4 times daily.

Adverse effect: gastrointestinal disturbances including nausea, diarrhea, dyspepsia, gastrointestinal hemorrhage; hypersensitivity reactions including rash, angioedema, bronchospasm; headache, dizziness, nervousness, depression, drowsiness, insomnia, vertigo, tinnitus, photosensitivity, hematuria, fluid retention (rarely precipitating congestive heart failure in elderly), raised blood pressure, renal failure; rarely hepatic damage, alveolitis, pulmonary eosinophilia, pancreatitis, visual disturbances, erythema multiforme (Stevens – Johnson syndrome), toxic dermal necrolysis (Lyell syndrome), colitis, aseptic meningitis.

NOTES

1. juvenile arthritis – ўсмирлар артрити - подростковый артрит

2. peptic ulceration – ошқозон яраси – язва желудка

3. fluid retention – суюқлик тўпланиши – скапливание жилкости

SULFASALAZINE

Sulfasalazine is a complementary drug for rheumatoid arthritis.

Enteric – coated tablets (gastro – resistant tablets), sulfasalazine 500mg.

Uses: severe rheumatoid arthritis; ulcerative colitis and Crohn disease.

Contraindication: hypersensitivity to salicylates and sulfonamides; severe renal impairment; child under 2 years; porphyria.

Precautions: monitor during first 3 months of treatment including blood counts and hepatic and renal function tests; renal impairment; pregnancy and breastfeeding; history of allergy; G6PD deficiency; slow acetylated status.

BONE MARROW SUPRESSION. Patients should be warned to report immediately any signs or symptoms of bone marrow suppression, for example unexplained bruising or bleeding, purpura, infection, sore throat.

Dosage:

Administered on expert advice.

Rheumatoid arthritis, *by mouth* as gastro – resistant tablets, ADULT initially 500mg daily, increased by 500 mg at intervals of 1 week to a maximum of 2-3g daily in divided doses.

Adverse effects: nausea, diarrhea, headache, loss of appetite, fever, blood disorders (including Heinz body anaemia, megaloblastic anemia, leucopenia, neutropenia, thrombocytopenia): hypersensitivity reactions (including rash, urticaria, erythematic multiforme, (Stevens – Johnson syndrome), exfoliate dermatitis, epidermal necrolysis, pruritus, photosensitivity , anaphylaxis, serum sickness, interstitial nephritis, lupus erythematosus – like syndrome); lung complications (including eosinophilia, fibrosing alveolitis); ocular complications (including per orbital oedema); stomatitis, parotitis; ataxia, aseptic meningitis, vertigo, tinnitus, alopecia, peripheral neuropathy, insomnia, depression, hallucinations; kidney reactions (including proteinuria, crystalluria, haematuria); oligospermia; rarely acute pancreatitis, hepatitis; urine may be colored orange; some soft contact lenses may be stained.

NOTES

1. coated tablets – қобиқли таблеткалар – таблетки с оболочкой
2. sore throat – томоқ қуриши – сухость в горле
3. loss of appetite – иштаҳа йўқолиши – потеря аппетита
4. contact lenses – кўз линзалари – контактные линзы

ANTIHISTAMINE

Chlorphenamine maleate

Chlorphenamine is a representative sedative antihistamine. Various drug can serve as alternatives.

Tablets, Chlorphenamine maleate 4mg

Elixir (oral solution), Chlorphenamine maleate 2mg/5ml

Injection (Solution for injection), Chlorphenamine maleate 10mg /ml, 1-ml ampoule.

Uses: symptomatic relief of allergy, allergic rhinitis (hay fever) and conjunctivitis, urticaria, insect stings and pruritus of allergic origin; adjunct in the emergency treatment of anaphylactic shock and severe angioedema.

Contraindication: prostatic enlargement, urinary retention; ileuses or pyloroduodenal obstruction; glaucoma; child under 1 year.

Precaution: pregnancy and breastfeeding; renal and hepatic impairment; epilepsy;

Dosage: Allergy *by mouth*, ADULT 4mg every 4-6 hours (maximum 24 mg daily); CHILD under 1 year not recommended, 1-2 years 1mg twice daily, 2-5 years 1 mg every 4-6 hours (maximum 6 mg daily); 6-12 years 2mg every 4-6 hours (maximum 12 mg daily).Allergic reactions, *by subcutaneous or intramuscular injection,* ADULT 10-20mg, CHILD under 10-20mg, repeated if required (maximum 40 mg in 24 hours); *by subcutaneous injection* CHILD 87.5 micrograms/kg, repeated if necessary up to 4 times daily.

Anaphylaxis (adjunct) *by intramuscular injection* over 1 minute, ADULT 10-20mg; CHILD under 1 year 250 micrograms/kg, 1-5 years 2.5-5mg, 6-12 years 5-10mg.

Adverse effects: drowsiness(rarely paradoxical stimulation with high doses, or in children or elderly), hypotension, headache, palpitations, psychomotor impairment, urinary retention, dry mouth, blurred vision, gastrointestinal disturbances; liver dysfunction; blood disorders, also rash and photosensitivity reactions, sweating and tremor, hyposensitivity reactions (including bronchospasm, angiodema, anaphylaxis); injections may be irritant.

NOTES

1. insect stings – ҳашоротлар чақиши – укус насекомых
2. drowsiness – уйқучанлик – сонливость
3. psychomotor impairment – ҳаракатланишнинг бузилиши – расстройство психомоторики
4. sweating – терлаш – потение
5. irritant – таъсирчан - раздражительный

ACTIVATED CHARCOAL

Powder (powder for oral suspension), activated charcoal

Uses: treatment of acute poisoning.

Contraindication: poisoning by hydrocarbons with high potential for harm if aspirated; poisoning by corrosive substance – may prevent visualization of lesions caused by poison.

Precaution: drowsy or unconscious patients – risk of aspiration (intubate before administration via nasogastric or gastric tube); not effective for poisoning with alcohol, clofenotane (dicophane DDT), cyanides, malathion, and metal salts including iron and lithium.

Dosage:

Poisoning (prevention of absorption) *by mouth*, ADULT 50-100g as a single dose, as soon as possible after ingestion of poison; INFANT 1g/kg as a single dose; CHILD 1-12 years,25g as a single dose (50g in severe poisoning).

Poisoning (active elimination), *by mouth*, ADULT and CHILD over 1 year, 25-50g initially, then 25-50g every 4-6 hours, INFANTS1g/kg every 4-6 hours.

Adverse effects: black stools; vomiting, constipation or diarrhea; pneumonitis – due to aspiration.

NOTES

1. activated charcoal – фаоллаштирилган кўмир – активированный уголь
2. poisoning – заҳарланиш – отравление
3. aspiration – бўшлиқдан сув чиқариб олиш – удаление жидкости из полости

RIFAMPICIN

Capsule, rifampicin 150mg, 300mg.

Uses: tuberculosis, in combination with other drugs; leprosy.

Contraindication: hypersensitivity to rifampicin; jaundice.

Precaution: reduce dose in hepatic impairment; liver function tests and blood counts required in liver disorders; alcohol dependency, elderly and on prolonged therapy; renal impairment (if dose above 600mg daily); pregnancy and breastfeeding; porphiria on oral contraceptives to use additional means.

NOTE. Resumption of rifampicin treatment after a long interval may cause serious immunological reactions, resulting in renal impairment, haemolysis, or thrombocytopenia – discontinue permanently if serious adverse effects occur.

LIVER DISORDERS. Patients or their curers should be told how to recognize signs of liver disorders and advised to discontinue treatment and seek immediate medical attention if symptoms such as persistent nausea, vomiting, malaise or jaundice develop.

Dosage: Tuberculosis (combination therapy), *by mouth*, ADULT and CHILD 10mg/kg daily or 3 times weekly (maximum dose 60 mg daily)

PATIENT ADVICE. Take dose at least 30 minutes before meal, as absorption is reduced when take with food.

Adverse effects: severe gastrointestinal disturbances including anorexia, nausea, vomiting, and diarrhea (antibiotic – associated colitis reported); headache, drowsiness, rashes, fever, influenza- like syndrome and respiratory symptoms, collapse, shock, haemolytic anaemia, acute renal failure, and thrombocytopenic purpura – more frequent with intermittent therapy; alternation of liver function – jaundice and potentially fatal hepatitis (dose related; do not exceed maximum dose of 600mg daily); oedema, muscular weakness and myopathy, exfoliative dermatitis, toxic epidermal necrolysis, pemphigoid reactions, leucopenia, eosinophilia, menstrual disturbances reported; urine, tears, saliva and sputum coloured orange – red.

NOTES

1. leprosy – мохов – лепра
2. persistent nausea – давомий кўнгил айниши – устойчивая тошнота
3. malaise – беҳоллик – недомогание
4. intermittent therapy – узилишли даволаш – прерывистое лечение
5. pemphigoid – сувли тошма - пузырчатка
6. saliva – сўлак - слюна

GRISEOFULVIN

Tablets, griseofulvin 125mg, 250mg.

Capsules griseofulvin 250mg.

Uses: fungal infection of the skin, scalp, hair and nails where topical treatment has failed or is inappropriate.

Contraindication: severe liver disease, pregnancy (avoid pregnancy during and for 1 month after treatment; men should not father children within 6 months of treatment); porphyria; systemic lupus erythematosus and related disorders.

Precaution: pre – existing hepatic insufficiency (closely monitor hepatic function throughout treatment); blood disorders (monitor blood count weekly during first month of treatment); breastfeeding.

SKILLED TASKS. May impair ability to perform skilled tasks, for example operating machinery, driving.

Dosage:

Superficial fungal infections, *by mouth*, ADULT 0.5-1g (but not less than 10 mg/kg) daily with food in single or divided doses; CHILD 10mg/kg daily with food in single or divided doses;

NOTE. Duration of treatment depends on the infection and thickness of keratin at site of infection; at least 4 weeks for skin and hair, at least 6 weeks for scalp ringworm and in severe infection, up to 3 months; 6 months for fingernails and 12 months for toenails.

Adverse effects: headache, nausea, vomiting, diarrhea, rashes, dizziness, fatigue reported; dry mouth and angular stomatitis; leucopenia, agranulocytosis, toxic epidermal necrolysis, erythema multiforme; serum sickness, angioederms; peripheral neuropathy; confusion and impaired coordination.

NOTES

1. scalp – бош териси – кожа головы
2. nails – тирноқлар - ногти
3. ringworm – ҳалқа чувалчанг – кольцевой червь

DEXTRAN 70

Dextran is representative plasma substitute. Various drugs can serve as alternatives.

Infusion (solution for infusion), dextran 70, 6% glucose intravenous infusion 5% or sodium chloride intravenous infusion 0.9%

Uses: short –term blood volume expansion.

Contraindication: severe congestive heart failure, renal failure; bleeding disorder such as thrombocytopenia and hypofibrinogenaemia.

Precaution: cardiac disease or renal impairment; monitor urine output; avoid hematocrit falling below 25-30%; where possible, monitor central venous pressure; can interfere with blood group cross – matching and biochemical tests – take samples before start of infusion; monitor for hypersensitivity reactions; pregnancy.

Dosage: Short –term blood volume expansion *by rapid intravenous infusion*, ADULT, 500-100 ml initially, followed by 500ml if necessary; total dosage should not exceed 20ml/kg during the initial 24 hours; if required 10ml/kg daily may be given for a further 2 days (treatment should not continue for longer than 3 days); CHILD, total dosage should not exceed 20ml/kg.

Adverse effect: hypersensitivity reactions including fever, nasal congestion, joint pains, urticaria, hypotension, bronchospasm – rarely severe anaphylactoid reactions; transient increase in bleeding time.

NOTES

1. congestive heart failure –турғун юрак етишмовчилиги – застойная сердечная недостаточность
2. hematocrit – гематокрит – асбоб – прибор
3. central venous pressure – марказий веноз қон босими – центральное венозное давление
4. nasal congestion – бурундан узоқ вақт қон кетиши – застойное кровотечение из носа
5. in bleeding time – қон кетиш вақтида – во время кровотечения

METHYLDOPA

Tablets,metyldopa 250mg

Uses: hypertension in pregnancy.

Contraindication: depression; active liver disease; phaeochromocytoma, porphyria.

Precaution: history of in hepatic impairment; renal impairment; blood counts- liver function tests advised; history of depression; positive direct Coomb test in up to 20% of patients (affects blood cross -matching); interference with laboratory tests; pregnancy and breastfeeding;

Dosage:

Hypertension in pregnancy, *by mouth*, ADULT initially 250mg 2-3 times daily; if necessary gradually increased at interval of 2 or more days, maximum 3g daily.

Adverse effects: tend to be transient and reversible, including sedation, dizziness, lightheadedness, postural hypotension, weakness, fatigue, headache, fluid retention and oedema, sexual dysfunction; impaired concentration and memory, depression, mild, mild psychosis, disturbed sleep and nightmares; drug fever, influenza – like syndrome; nausea, vomiting, constipation, diarrhea, dry mouth, stomatitis, sail adenitis, liver function impairment, hepatitis, jaundice rarely fatal hepatic necrosis; bone – marrow depression, hemolytic anemia, leucopenia, thrombocytopenia, eosinophilia, parkinsonism; rash (including toxic epidermal necrolysis); nasal congestion; black or sore tongue; bradycardia, exacerbation of angina; myalgia, arthralgia, paraesthesia, Bell palsy; pancreatitis; hypersensitivity reactions including lupus erythematosus - like syndrome, myocarditis, pericarditis; gynaecomastia, hyperprolactinaemia, amenorrhea; urine darkens on standing.

NOTES

1. transient – тез ўтувчи – преходящий
2. reversible – қайтарилувчи – повторяющийся
3. lightheadedness – енгил бош айланиши – легкое головокружение
4. disturbed sleep – уйқу бузилиши – нарушение сна
5. nightmares – тунги алаҳсираш – ночные кошмары

PREDNISOLONE

Prednisolone is a representative corticosteroid. Various drugs can serve as alternatives.

Tablets, Prednisolone 5mg, 25mg

Uses: suppression of inflammatory and allergic reaction; with antineoplastic drugs for acute leukemia and lymphomas; asthma.

Contraindication: see notes above; systematic infection (unless life – threatening or specific antimicrobial therapy given); avoid live virus vaccines in those receiving immunosuppressive dose (serum antibody response diminished).

Precaution: adrenal suppression during prolonged treatment which persists for years after stopping treatment; ensure patients understand importance of compliance with dosage and have guidance on precautions to reduce risks; monitor weight, blood pressure, fluid and electrolyte balance and blood glucose levels throughout prolonged treatment; infections greater susceptibility, symptoms may be masked until advanced stage; clinical presentation may be atypical; risk of chickenpox and measles increased; quiescent tuberculosis – chemo prophylactic therapy during prolonged corticosteroid treatment; elderly; children and adolescent (growth retardation possibly irreversibly); hypertension, recent myocardial infarction (rupture reported), congestive heart failure, renal impairment, hepatic impairment; diabetes mellitus including family history, osteoporosis (my be manifested as back pain, postmenopausal women at special risk), glaucoma including family history, severe affective disorder (particularly if history of steroid – induced psychosis), epilepsy, psoriasis, peptic ulcer, pregnancy and breastfeeding.

Dosage:

Suppression of inflammatory and allergic reaction, *by mouth*, ADULT initially up to 10-20mg daily (severe disease, up to 60mg daily), preferably taken in the morning after breakfast ; dose can often be reduced within a few days, but may need to be continued for several weeks and months; CHILD fraction of adult dose may be used (for example, at 1 year 25% of adult dose, 7 years 50%, and at 12 years 75%) but clinical factors must be given due weight.

Maintenance, *by mouth*, 2.5-15mg daily or higher; cushingoid features are increasingly likely with doses above 7.5mg daily; CHILD fraction of adult dose may be used (for example, at 1 year 25% of adult dose, 7 years 50%, and at 12 years 75%) but clinical factors must be given due weight.

Myasthenia gravis, initially 10mg on alternate days, increased in steps of 10 on alternate days to 1-1.5mg/kg (maximum 100mg) alternate days *or* initially 5mg daily increased in steps of 5mg daily to usual dose of 60-80mg daily (0.75-1mg/kg daily).

Adverse effects: gastrointestinal effects including dyspepsia, peptic ulceration (with perforation), abdominal distension, acute pancreatitis, esophageal ulceration and candidosis; musculoskeletal effects including proximal myopathy, osteoporosis, vertebral and long bone fractures, vascular osteonecrosis, tendon rupture; endocrine effects including adrenal suppression, menstrual irregularities and amenorrhea, Cushing syndrome (with high doses, usually reversible on withdrawal), hirsutism, weight gain, negative nitrogen and calcium balance, increased appetite, increased susceptibility to and severity of infection; hypersensitivity reactions including anaphylaxis, thromboembolism, nausea, malaise and hiccups.

NOTES

1. quiescent tuberculosis – симптомсиз туберкулёз - бессимптомный туберкулёз
2. chicken pox – товуқ тери – гусиная кожа
3. measles – қизамиқ – корь
4. vertebral – умуртқа - позвоночный
5. tendon rupture – пай чўзилиши – разрыв сухожилии

ERGOMETRINE MALEATE

Ergometrine is subject to international control under the United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substance (1988).

Ergometrine is a representative oxytocic drug. Various drugs can serve as alternatives.

Tablets, Ergometrine maleate 200 micrograms.

Injection (Solution for injection), ergometrine maleate 200 micrograms/ml, 1-ml ampoule.

NOTE. Injection requires transport by 'cold chain' and refrigerated storage.

Uses: prevention and treatment of postpartum and post –abortion hemorrhage in emergency situations and where oxytocin not available.

Contraindication: indication of labor, first and second stages of labor; vascular disease, severe cardiac disease especially angina pectoris; severe hypotension; severe renal and hepatic impairment; sepsis; eclampsia.

Precautions: cardiac disease, hypotension, hepatic impairment and renal failure, multiple pregnancy, porphyria.

Dosage: Prevention and treatment of postpartum hemorrhage, when oxytocin is not available, *by intramuscular injection* ADULT and ADOLESCENT 200 micrograms when the anterior shoulder is delivered or immediately after birth.

Excessive uterine bleeding, *by slow intravenous infusion*, ADULT and ADOLESCENT 250-500 micrograms when the anterior shoulder is delivered or immediately after birth.

Secondary postpartum hemorrhage, *by mouth*, ADULT and ADOLESCENT 250-500 micrograms 3 times daily for 3 days.

Adverse effects: headache, nausea, vomiting, dizziness, tinnitus, abdominal pain, chest pain, palpitations, dyspnoea, bradycardia, transient hypertension, vasoconstriction; stroke, myocardial infarction and oedema also reported.

NOTES

1. refrigerated storage – музлатгичда сақлаш – хранение в холодильнике
2. hemorrhage – қон кетиши - кровотечение
3. birth – туғилиш – рождение
4. adolescent – ўсмир – подросток
5. stroke – фалаж - паралич