HYDROCORTISONE HIKMA® Inj.

Hydrocortisone (as sodium succinate)

Properties

PHARMACODYNAMICS

The therapeutic activity of Hydrocortisone Hikma Sterile powder is qualitatively identical to that of hydrocortisone.Glucocorticoids diffuse across cell membranes and complex with specific cytoplasmic receptors. These complexes then enter the cell nucleus, bind to DNA (chromatin), and stimulate transcription of mRNA and subsequent protein synthesis of various enzymes thought to be ultimately responsible for the effects of systemic use of glucocorticoids. Maximum pharmacologic activity of corticosteroids lays behind peak blood levels, suggesting that most effects of the drug result from modification of enzyme activity rather than from direct actions by the drug.

PHARMACOKINETICS

Peak plasma levels are obtained approximately 30 to 60 minutes after I.M. administration of Hydrocortisone Hikma sterile powder. Approximately 40 to 90% of hydrocortisone is bound to albumin.

The free unbound fraction of the hormone determines biologic activity while the bound fraction serves as reserve.

Hydrocortisone is mainly metabolized in the liver.

22 to 30% of the I.V or I.M administered doses are excreted through the urine in 24 hours.

Elimination of the administered dose is nearly complete within 12 hours. Thus if constantly high blood levels are required, I.V. or I.M. injections should be made every 4 to 6 hours.

INDICATIONS

1. Endocrine Disorders

Primary or secondary adrenocortical insufficiency (hydrocortisone or cortisone is the drug of choice; synthetic analogues may be used in conjunction with mineralocorticoids where applicable; in infancy, mineralocorticoid supplementation is of particular importance). Acute adrenocortical insufficiency (hydrocortisone or cortisone is the drug of choice; mineralocorticoid supplementation may be necessary, particularly when synthetic analogues are used).

Preoperatively and in the event of serious trauma or illness, in patients with known adrenal insufficiency or when adrenocortical reserve is doubtful. Shock unresponsive to conventional therapy if adrenocortical insufficiency exists or is suspected.

Congenital adrenal hyperplasia.

Nonsuppurative thyroiditis hypercalcemia associated with cancer.

2. Rheumatic Disorders

As adjunctive therapy for short-term administration (to tide the patient over an acute episode or exacerbation) in:

Post-traumatic osteoarthritis, acute and subacute bursitis, synovitis or osteoarthritis, epicondylitis, rheumatoid arthritis, including juvenile rheumatoid arthritis (selected cases may require low-dose maintenance therapy), ankylosing spondylitis, acute nonspecific tenosynovitis, acute gouty arthritis, psoriatic arthritis.

3. Collagen Diseases

During an exacerbation or as maintenance therapy in selected cases of:

Systemic lupus erythematosus, acute rheumatic carditis, systemic dermatomyositis (polymyositis).

4. Dermatologic Diseases

Pemphigus, bullous dermatitis herpetiformis, severe erythema multiforme (stevens-johnson syndrome), severe psoriasis, exfoliative dermatitis, mycosis fungoides, severe seborrheic dermatitis.

5. Allergic States

Control of severe or incapacitating allergic conditions intractable to adequate trials of conventional treatment in:

Bronchial asthma, contact dermatitis, atopic dermatitis, serum sickness, seasonal or perennial allergic rhinitis, drug hypersensitivity reactions, urticarial transfusion reactions, acute noninfectious laryngeal edema (epinephrine is the drug of first choice).

6. Ophthalmic Diseases

Severe acute and chronic allergic and inflammatory processes involving the eye, such as:

Herpes zoster ophthalmicus, sympathetic ophthalmia, iritis, iridocyclitis, anterior segment inflammation, chorioretinitis, allergic conjunctivitis, diffuse posterior uveitis and choroiditis, allergic corneal marginal ulcers, optic neuritis, keratitis.

7. Gastrointestinal Diseases

To tide the patient over a critical period of the disease in:

Ulcerative colitis (systemic therapy), regional enteritis (systemic therapy).

8. Respiratory Diseases

Symptomatic sarcoidosis, loeffler's syndrome not manageable by other means, berylliosis, fulminating or disseminated pulmonary tuberculosis when used concurrently with appropriate antituberculous chemotherapy, aspiration pneumonitis.

9. Hematologic Disorders

Acquired (autoimmune) hemolytic anemia, erythroblastopenia (rbc anemia), idiopathic thrombocytopenic purpura in adults (I.V. only; I.M. administration is contraindicated), congenital (erythroid) hypoplastic anemia, secondary thrombocytopenia in adults.

10. Neoplastic Diseases

For palliative management of:

Leukemias and lymphomas in adults, acute leukemia of childhood.

11. Edematous States

To induce diuresis or remission of proteinuria in the nephrotic syndrome, without uremia, of the idiopathic type or that due to lupus erythematosus.

12. Nervous System

Acute exacerbations of multiple sclerosis.

13. Miscellaneous

Tuberculous meningitis with subarachnoid block or impending block when used concurrently with appropriate antituberculous chemotherapy, trichinosis with neurologic or myocardial involvement.

DOSAGE AND ADMINISTRATION

This preparation may be administered by intravenous injection, by intravenous infusion, or by intramuscular injection, the preferred method for initial emergency use being intravenous injection. Following the initial emergency period, consideration should be given to employing a longer acting injectable preparation or an oral preparation. Therapy is initiated by administering Hydrocortisone Hikma sterile powder intravenously over a period of 30 seconds (e.g. 100 mg) to 10 minutes (e.g. 500 mg or more). In general, high dose corticosteroid therapy should be continued only until the patient's condition has stabilized- usually not beyond 48 to 72 hours. Although adverse effects associated with high dose, short-term corticoid therapy are uncommon, peptic ulceration may occur. Prophylactic antacid therapy may be indicated.

When high dose hydrocortisone therapy must be continued beyond 48-72 hours, hypernatremia may occur. Under such circumstances it may be desirable to replace Hydrocortisone Hikma with a corticoid such as methylprednisolone sodium succinate which causes little or no sodium retention.

The initial dose of Hydrocortisone Hikma sterile powder is 100 mg to 500 mg, depending on the severity of the condition. This dose may be repeated at intervals of 2, 4 or 6 hours as indicated by the patient's response and clinical condition. While the dose may be reduced for infants and children, it is governed more by the severity of the condition and response of the patient than by age or body weight but should not be less than 25 mg daily.

Patients subjected to severe stress following corticosteroid therapy should be observed closely for signs and symptoms of adrenocortical insufficiency.

Corticoid therapy is an adjunct to, and not a replacement for, conventional therapy.

Preparation of Solutions

100 mg Plain—For intravenous or intramuscular injection, prepare solution by aseptically adding not more than 2 ml of Bacteriostatic Water for Injection or Bacteriostatic Sodium Chloride Injection to the contents of one vial.

For intravenous infusion, first prepare solution by adding not more than 2 ml of Bacteriostatic Water for Injection to the vial; this solution may then be added to 100 to 1000 ml of the following: 5% dextrose in water (or isotonic saline solution or 5% dextrose in isotonic saline solution if patient is not on sodium restriction).

In cases where administration of a small volume of fluid is desirable, 100 mg to 3000 mg of Hydrocortisone Hikma may be added to 50 ml of the above diluents. The resulting solutions are stable for at least 4 hours and may be administered either directly or by IV piggyback. When reconstituted as directed, pH's of the solutions range from 7 to 8 .

CONTRAINDICATIONS

Systemic fungal infections.

Known hypersensitivity to components.

PRECAUTIONS

In patients on corticosteroid therapy subjected to unusual stress, increased dosage of rapidly acting corticosteroids before, during, and after the stressful situation is indicated.

Corticosteroids may mask some signs of infection, and new infections may appear during their use. There may be decreased resistance and inability to localize infection when corticosteroids are used.

Average and large doses of hydrocortisone can cause elevation of blood pressure, salt and water retention, and increased excretion of potassium. These effects are less likely to occur with the synthetic derivatives except when used in large doses. Dietary salt restriction and potassium supplementation may be necessary. All corticosteroids increase calcium excretion.

- While on corticosteroid therapy patients should not be vaccinated against smallpox. Other immunization procedures should not be undertaken in patients who are on corticosteroids, especially on high doses, because of possible hazards of neurological complications and lack of antibody response.
- The use of Hydrocortisone Hikma Sterile Powder in active tuberculosis should be restricted to those cases of fulminating or disseminated tuberculosis in which the corticosteroid is used for the management of the disease in conjunction with appropriate antituberculous regimen.
- If corticosteroids are indicated in patients with Latent tuberculosis or tuberculin reactivity, close observation is necessary as reactivation of the disease may occur. During prolonged corticosteroid therapy, these patients should receive chemoprophylaxis.

Because rare instances of anaphylactoid reactions (e.g. bronchospasm) have occurred in patients receiving parenteral corticosteroid therapy, appropriate precautionary measure should be taken prior to administration especially when the patient has a history of allergy to any drug.

Bacteriostatic water for injection contains benzyl alcohol. Benzyl alcohol has been reported to be associated with a fatal "gasping syndrome" in premature infants.

Although recent studies have not been conducted with hydrocortisone or other corticosteroids, studies of methylprednisolone sodium succinate in septic shock suggest that increased mortality may occur in some subgroups of patients at higher risk (i.e. elevated creatinine greater than 2.0 mg % or with secondary infections).

Corticosteroids should be used cautiously in patients with ocular herpes simplex for fear of corneal perforation.

Psychic derangements may appear when corticosteroids are used, ranging from euphoria, insomnia, mood swings, personality changes. And severe depression to frank psychotic manifestations. Also, existing emotional instability of psychotic tendencies may be aggravated by corticosteroids.

Steroids should be used with caution in nonspecific ulcerative colitis, if there is a probability of impending perforation, abscess of other phylogenic infections, also in diverticulitis, fresh intestinal anastomoses, active or latent peptic ulcer, renal insufficiency, hypertension, osteoporosis and myasthenia gravis.

Although controlled clinical trials have shown corticosteroids to be effective in speeding the resolution of acute exacerbations of multiple sclerosis, they do not show that corticosteroids affect the ultimate outcome or natural history of the disease. The studies do show that relatively high doses of corticosteroids are necessary to demonstrate a significant effect (see Dosage and administration).

There is no evidence that corticosteroids are carcinogenic, mutagenic or impair fertility. Growth may be suppressed in children receiving long-term, daily-divided dose glucocorticoid therapy. The use of such a regimen should be restricted to the most serious indications.

Pregnancy and lactation

Some animal studies have shown that corticosteroids, when administered to the mother at high doses, may cause fetal malformations. Adequate human reproductive studies have not been done with corticosteroids, Therefore the use of this drug in pregnancy, nursing mothers or women of childbearing potential requires that the benefits of the drug be carefully weighed against the potential risk to the mother and embryo or fetus. Since there is inadequate evidence of safety in human pregnancy, this drug should be used in pregnancy only if clearly needed.

Corticosteroids readily cross the placenta. Infants born of mothers who have received substantial doses of corticosteroids during pregnancy must be carefully observed and evaluated for signs of adrenal insufficiency.

There are no known effects of corticosteroids on labor and delivery. Corticosteroids are excreted in breast milk.

SIDE EFFECTS

FLUID AND ELECTROLYTE DISTURBANCES, sodium retention, congestive heart failure in susceptible patients, hypertension, fluid retention, potassium loss, hypokalemic alkalosis.

MUSCULOSKELETAL, steroid myopathy, muscle weakness, osteoporosis, pathologic fractures, vertebral compression fractures, aseptic necrosis.

GASTROINTESTINAL, peptic ulceration with possible perforation and hemorrhage, gastric hemorrhage, pancreatitis, esophagitis, increases in alanine transaminase, perforation of the bowel.

DERMATOLOGIC, impaired wound healing , thin fragile skin, petechiae and ecchymoses.

Neurological, increased intracranial pressure, pseudotumor cerebri, psychic derangements, seizures.

METABOLIC, negative nitrogen balance due to protein catabolism.

ENDOCRINE, menstrual irregularities, development of cushingoid state, suppression of pituitary-adrenal axis, decreased carbohydrate tolerance, manifestations of latent diabetes mellitus, increased requirements of insulin or oral hypoglycemic agents in diabetics, suppression of growth in children.

OPHTHALMIC, posterior subcapsular cataracts, increased intraocular pressure, exophthalmos.

IMMUNE SYSTEM, masking of infections, latent infections become active, opportunistic infections, hypersensitivity reactions, including anaphylaxis, may suppress reactions to skin tests.

The following additional reactions are related to parenteral corticosteroid therapy: Anaphylactoid reactions (e.g. bronchospasm, laryngeal edema, urticaria).

OVERDOSAGE

There is no clinical syndrome of acute overdosage with Hydrocortisone Hikma Sterile powder (hydrocortisone sodium succinate). Hydrocortisone is dialyzable.

STORAGE

Store below 25°C.

Use solution only if it is clear. Unused solution should be discarded after 3 days.

PRESENTATION

Vials

HYDROCORTISONE HIKMA 100 mg: Hydrocortisone equivalent to hydrocortisone sodium succinate 100 mg

Excipients: Monobasic sodium Phosphate, Dibasic sodium Phosphate, Sodium Hydroxide.

Council of Arab Health Ministers, Union of Arab Pharmacists

THIS IS A MEDICAMENT

- A medicament is a product which affects your health, and its consumption contrary to instructions is dangerous.
- Follow the doctor's prescription strictly, the method of use and the instructions of the pharmacist who sold the medicament.
- The doctor and the pharmacist are experts in medicine, its benefits and risks.
- Do not by yourself interrupt the period of treatment prescribed for you.
- Do not repeat the same prescription without consulting your doctor.

Manufactured by:
Hikma Italy, SpA, Italy
For: Hikma Pharmaceuticals, Amman-Jordan

Keep medicament out of the reach of children

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