[싱가포르] 디베타솔주 설명서

Size : 120 x 275 (mm)

수정사항

1. STORAGE 부분 수정
2. HOW SUPPLIED 부분 수정
3. ml → mL 로 변경

Corticosteroldal Hormone

DIBETASOL Injection

DIBETASOL Injection provides a combination of highly soluble and very slightly soluble esters of betamethasone that produce marked prompt, and sustained anti-inflammatory, anti-rheumatic, and anti allergic effects.
Prompt therapeutic activity in corticosteroid-responsive condition is achieved by the soluble eater, betamethasone sodium phosphate, which is quickly absorbed after injection
Sustained activity is provided by betamathasone dipropionate, which is only slightly soluble and affords a repository for slow absorption, thereby controlling symptoms over a prolonged period.

DESCRIPTION

DIBETASOL Injection is a white suspension in a colorless clear glass vial. It comes in a box of 10 vials.

■ COMPOSITION : Each vial(1mL) contains

Betamethasone dipropionate·····6.43mg
Betamethasone sodium phosphate····· 2.63mg
Benzyl alcohol·····9mg
Propylparaben·····0.2mg
Methylparaben ····· 1.3mg

PHARMACOLOGY

The most of action of betamethasone disodium phosphate, a steroidal anti - inflammatory drug on the metabolism of collagen and non- collagen protein in rat carrageen granuloma was studied. The inhibitory effect of the steroid on the incorporation of [$_3$H] proline into collagen and non-collagen protein was progressively increased with an increase in dose and reached a maximum at a level of 0.2mg/rat. The effect of the steroid on the degradation of collagen and non-collagen protein labeled with [$_3$H] proline was investigated. Betamethasone disodium phosphate inhibited the degradation of collagen in vivo and markedly reduced the amount of dialyzable hydroxyproline formed by the degradation of collagen during incubation of the minced granuloma in vitro. The degradation of non-collagen protein in contrast with the degradation of collagen was apparently not affected by the steroid treatment. It seems likely that betamethasone sodium phosphate, a steroidal anti-inflammatory drug causes the resorption of pre-existing granulomatous tissue though a strong inhibitory action on protein synthesis without apparently affecting the degradation of non-collagen protein even though the degradation of collagen is inhibited.

PHARMACOKINETICS

Absorption

Following IM administration, absorption of the water-soluble sodium phosphate and sodium succinate is rapid. When the most rapid onset of action is desired a water-soluble glucocorticold ester should be administered IV Absorption is markedly increased when the skin has lost its keratin layer and can be increased by inflammation and/or diseases of the epidermal barrier (e.g. psoriasis, eczema)

Distribution

Animal studies indicate that most glucocorticoids are rapidly removed from the blood and distributed to muscle, liver, skin, intestines, and kidneys. Glucocorticoids vary in the extent to which they are bound to plasma proteins. Cortisol (hydrocortisone) is extensively bound to corticosteroid-binding globulin (transcortin and albumin), which are plasma proteins with physiological concentrations cortisol is bound primarily to transcortin and only 5-10% of cortisol in plasma is unbound and is biologically active. Because only unbound drug is pharmacologically active, patients with low serum albumin concentrations may be more susceptible to effects of glucocorticolds than patients with normal serum albumin concentration.

Elimination

Glucocorticolds having a ketone group at C-11 (e.g cortisone, prednisone, and meprednisone) must be reduced (primarily in the liver) to their corresponding 11 - hydroxy analogs (hydrocortisone, prednisolone and meprednisolone) in order to the pharmacologically active.
Pharmacologically active glucocorticolds are metabolized in most tissues, but primarily in the liver to biologically inactive compounds. The half-life of hydrocortisone may be prolonged in patients with hypothyroidism. Inactive metabolites are excreted by the kidney, primarily as glucuronides and sulfates but also as unconjugated products. Small amounts of unmetabolized drugs are also excreted in urine. Negligible amounts of most of the drugs are excreted in bile: enterohepatic circulation does not occur.

■ INDICATION

1. Musculoskeletal and Soft Tissue Conditions : Rheumatoid arthritis, osteoarthritis, bursitis, ankylosing spondylitis, epicondylitis, radiculitis, coccydynia, torticollis, sciatica, lumbago, ganglion cyst, exostosis, fascilitis.
2. Allergic Conditions : Chronic bronchial asthma (including adjunctive therapy for status asthmaticus), hay fever, angioneurotic edema, allergic bronchitis, seasonal or perennial allergic rhinitis, drug hypersensitivities, serum sickness, insect bites.
3. Collagen Disease : Disseminated lupus erythematosus, scleroderma, dermatomyositis, periarteritis nodosa.

■ DOSAGE AND ADMINISTRATION

1. Systemic Administration
   Treatment is initiated with 1 to 2mL by deep intramuscular injection in the gluteal region. Repeat the injection according to the severity of symptom 3~4 weeks later
2. Local Administration
   Administer 1mL as a single dose. In case of intra-articular injection, dosage may be adjusted to the size of joint and injection site(0.25~2mL). After a favorable response is noted, the proper maintenance dosage should be determined by decreasing the initial drug dosage in small decrements at appropriate time intervals until the lowest dosage which will maintain an adequate clinical response is reached. Dosage may be adjusted according to age and symptoms. Dosage requirements are variable and must be individualized on the basis of the specific disease, the severity of the disease and the response of the patient.

CONTRAINDICATIONS

1) Patients with systemic fungal infection
2) Patients hypersensitive to this drug or any of other corticosteroidal hormones.
3) Patients with idiopathic thrombocytopenia purpura
4) This drug containing benzyl alcohol is contraindicated in neonates and premature infants.

ADVERSE REACTION

1) Fluid and electrolytes : Sodium retention, fluid retention, edema, hypertension, hypokalemic alkalosis, etc. may occur.
2) Musculoskeletal : Osteoporosis, aseptic necrosis of caput fomoris and caput humeri, myophthy, myoatrophy, pathologic fracture, vertebral compression fractures, etc. may occur.

3) Gastrointestinal : Pancreatitis, peptic ulcer, ulcerative hemorrhage, etc. may occur.
4) Neurologic : Insanity, depressed state, euphoria, sleeplessness, headache, vertigo, convulsion, etc. may occur
5) Endocrine : Emmeniopathy, Cushing's syndrome, diabetes, decreased carbohydrate tolerance, adrenocortical insufficiency, ACTH secretion insufficiency, suppression of growth in children may occur.
6) Ophthalmic : Posterior subcapsular cataracts, glaucoma, occular hypertension, exophthalmos may occur.
7) Lipid-protein metabolism : Moon face, supraclavicular fat pad, negative nitrogen balance may occur.
8) Dermatologic : Local skin atrophy, impaired wound healing, acne, hypertrichosis, ecchymosis, pigmentation, purpura may occur.

DRUG INTERACTIONS
1) Concurrent use of Phenobarbital, rifampicin or phenytoin may enhance corticosteroids metabolism, thus reducing their therapeutic effects.
2) Since concurrent use of corticosteroids with anticoagulants and anti-diabetic drugs may decrease their effects, dosage adjustment may be necessary
3) Since corticosteroids may decrease blood salicylate concentrations, dosage adjustment may be necessary in concurrent use with salicylate derivatives or this drug should be discontinued.
4) Concurrent use of corticosteroids with diuretic (except potassium sparing diuretics) may enhance hypokalemia.
5) Concurrent use of corticosteroids with cardiac glycosides may enhance the possibility of arrhythmias or digitalis toxicity associated with hypojalemia.
6) Combined effects of noncorticosteroidal anti-inflammatory drugs or alcohol with glucocorticoids may result in an increased occurrence or increased severity or gastrointestinal ulceration.

USE IN PREGNANCY & LACTATION
1) Use in Pregnancy
Occurrence of malformation in animal studies has been reported and in case of infants born of mothers who have received substantial doses of corticosteroids during pregnancy may have hypoadrenalism. Therefore the use of this drug in pregnancy and women of child bearing potential requires that the possible benefit of the drug be outweighed against the potential hazard.

OVERDOSAGE
Symptoms : Acute over dosage with glucocorticosteroids, including betamethasone is not expected to lead to life-threatening situation. Except at the most extreme dosages, a few days of excessive glucocorticosteroid dosing is unlikely to produce harmful result in the absence of specific contraindications, eg in patients with diabetes mellitus, glaucoma, or active peptic ulcer, or in patients on medications, eg digitalis, coumarin-type anticoagulants or potassium-depleting diuretics.
Treatment : Complications resulting from the metabolic effects of the corticosteroid or from deleterious effects of the basic or concomitant illnesses or resulting from drug interactions should be handled as appropriate. Maintain adequate fluid intake and monitor electrolytes in serum and urine, with particular attention to sodium and potassium balance. Treat electrolyte imbalance if necessary.

PRECAUTIONS
1) DIBETASOL Injection is not for intravenous or subcutaneous use and should be administered aseptically.
2) Dosage may be increased for remission of stress caused by serious infection, surgery or injury. The appropriate measure such as gradual decrease of dose should be taken when discontinuing after long term or high does therapy.
3) Prolonged use may produce posterior subcapsular cataracts, glaucoma, damage of optic nerves, and may enhance the establishment of secondary ocular infections due to fungi or viruses.
4) Because rare instances of anaphylactoid reactions have occurred with parenteral corticosteroids administration, appropriate precautionary measures should be taken prior to administration, especially when the patient has a history of drug allergy.
5) DIBETASOL injection should be not be injected into infected or unstable joints. Following intra-articular therapy, care should be taken by the patient to avoid overuse of the joint.
6) Examination of any joint fluids is essential to exclude an infectious state. Swelling of injected site, increase in pain, restriction of joint motion, fever, and malaise are symptoms of infectious arthritis and if sepsis is confirmed, appropriate antimicrobial therapy should be instituted.
7) Children who are on corticosteroids in asthma, allergic rhinitis, pediatric arthritis should be warned to avoid exposure to chickenpox or measles which can cause serious complications by immunosuppressant effect of this product.

As this preparation contains bezyl alcohol, its use should be avoided in children under two years old. Not to be used in neonates.

Careful Administrations
1) This drug should be administered with caution in patient with herpes simplex keratitis, psychosis, nonspecific, ulcerative colitis, peptic ulcer, diverticulitis, renal failure, osteoporosis, myasthenia gravis, hypertension, infection or patients who recently received enteroanastomosis.
2) When this drug is administered to patients with latent tuberculosis, this drug can reactivate tuberculosis, therefore close observation is necessary and in long-term administration, preventive chemotherapy should be instituted.
3) Other
It has been reported when the protective inoculation such as vaccination was given to the patients on corticosteroids, nervous impediment and lack of antibody reactions may occur, therefore protective inoculation against small pox or other diseases should be avoided.

■ STORAGE
Store in a hermetic container
Shake well before use
Store below 30℃ and protect from freezing

■ **SHELF LIFE** : 3years from manufacturing date

■ **HOW SUPPLIED** : 1 mL/Vial × 10

Product Registration Holder : The Zyfas Medical Co. No. 7, Jalan Molek 3/10, Taman Molek 81100 Johor Bahru

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