

Avalair ^{4mg}

Montelukast 4mg
CHEWABLE TABLET

COMPOSITION:

Each chewable tablet contains:

Montelukast sodium 4.16mg, equivalent to Montelukast 4.0 mg

PRODUCT DESCRIPTION:

Avalair 4mg Tablet is a pink, oval, bi-convex shaped chewable tablets, engraved with "CCP D79" on one side.

PHARMACOLOGICAL PROPERTIES:

Pharmacodynamic properties

ATC code : R03D C03

Montelukast is a selective and active leukotriene receptor antagonist. Montelukast inhibits bronchoconstriction due to antigen challenge. Montelukast is a selective leukotriene receptor antagonist of the cysteinyl leukotriene CysLT₁ receptor. The cysteinyl leukotrienes (LTC₄, LTD₄, LTE₄) are products of arachidonic acid metabolism that are released from various cells, including mast cells and eosinophils. They bind to cysteinyl leukotriene receptors (CysLT) found in the human airway. Binding of cysteinyl leukotrienes to leukotriene receptors has been correlated with the pathophysiology of asthma, including airway edema, smooth muscle contraction, and altered cellular activity associated with the inflammatory process, factors that contribute to the signs and symptoms of asthma.

It binds to cysteinyl leukotrienes (CysLT) type-1 receptors found in human airway (smooth muscle cells and macrophages), which prevents airway edema, smooth muscle contraction and other respiratory inflammation. The leukotrienes are also released from the nasal mucosa after allergen exposure where montelukast sodium may inhibit symptoms of allergic rhinitis.

Montelukast binding to the CysLT₁ receptor is high-affinity and selective, preferring the CysLT₁ receptor to other pharmacologically important airway receptors, such as the prostanoid, cholinergic, or beta-adrenergic receptor. Montelukast inhibits physiologic actions of LTD₄ at the CysLT₁ receptors, without any agonist activity.

Montelukast causes bronchodilation within 2 hours of oral administration; these effects were additive to the bronchodilation caused by a β -agonist.

Pharmacokinetic properties

Absorption:

Montelukast is rapidly and nearly completely absorbed following oral administration. Peak plasma concentrations of montelukast occur 2 to 4 hours after oral doses. The mean oral bioavailability is 64% to 73%. The oral bioavailability and C_{max} are not influenced by a standard meal.

Distribution

Montelukast is more than 99% bound to plasma proteins. The steady-state volume of distribution of montelukast averages 8 to 11 liters. Studies in rats with radiolabeled montelukast indicate minimal distribution across the blood-brain barrier.

Metabolism

Montelukast is extensively metabolized in the liver by cytochrome P450 isoenzymes, mainly by CYP2C8 and to a lesser extent by CYP3A4 and CYP2C9. Therapeutic plasma concentrations of montelukast do not inhibit cytochromes P450 3A4, 2C9, 1A2, 2A6, 2C19, or 2D6.

Elimination

The plasma clearance of montelukast averages 45 mL/min in healthy adults. Montelukast and its metabolites are excreted principally in the faeces via the bile.

Elimination Half-life: 2.7 to 5.5 hours

INDICATIONS:

For the prophylaxis and chronic treatment of asthma in adults and pediatric patients 12 months of age and older.

Avalair 4mg is indicated in adults and pediatric patients 2 years of age and older for the relief of daytime and nighttime symptoms of seasonal allergic rhinitis

DOSAGE AND ADMINISTRATION:

Montelukast should be taken once daily. For asthma, the dose should be taken in the evening. For allergic rhinitis, the time of administration may be individualized to suit patient needs.

Patients with both asthma and allergic rhinitis should take only one tablet daily in the evening.

The dosage for pediatric in patients 2 to 5 years of age is one 4mg chewable tablet daily.

Pediatric Patients 12 months to 2 Years of Age with Asthma The dosage for pediatric patients 12 months to 2 years of age is one packet of 4mg oral granules once daily.

General Recommendations

The therapeutic effect of montelukast on parameters of asthma control occurs within one day. Montelukast chewable tablets can be taken with or without food. Patients should be advised to continue taking Montelukast while their asthma is controlled, as well as during periods of worsening asthma.

No dosage adjustment is necessary for pediatric patients, for the elderly, for patients with renal insufficiency, or mild-to-moderate hepatic impairment, or for patients of either gender.

Montelukast is a long term-controller medication which should not be substituted for short acting beta-agonists. It is effective alone or in combination with other prophylactic agent.

Montelukast is a preventive agent, which should be used in addition to other drugs for the management of asthma.

Therapy with Montelukast in Relation to Other Treatments for Asthma Montelukast can be added to a patient's existing treatment regimen.

Reduction in Concomitant Therapy:

Bronchodilator Treatments: Montelukast can be added to the treatment regimen of patients who are not adequately controlled on bronchodilator alone. When a clinical response is evident (usually after the first dose), the patient's bronchodilator therapy can be reduced as tolerated.

Inhaled Corticosteroids: Treatment with Montelukast provides additional clinical benefit to patients treated with inhaled corticosteroids. A reduction in the corticosteroid dose can be made as tolerated. The dose should be reduced gradually with medical supervision. In some patients, the dose of inhaled corticosteroids can be tapered off completely. Montelukast should not be abruptly substituted for inhaled corticosteroids.

CONTRAINDICATIONS:

Hypersensitivity to montelukast or any component of the formulation.

PRECAUTIONS AND WARNINGS

The efficacy of oral Montelukast for the treatment of acute asthma attacks has not been established. Therefore, oral Montelukast should not be used to treat acute asthma attacks. Patients should be advised to have appropriate rescue medication available.

While the dose of concomitant inhaled corticosteroid may be reduced gradually under medical supervision, Montelukast should not be abruptly substituted for inhaled or oral corticosteroids.

Neuropsychiatric events (eg, agitation, aggression, anxiousness, dream abnormalities, hallucinations, depression, disorientation, insomnia, irritability, restlessness, suicidal thinking and behavior (including suicide), tremor) have occurred. Since other factors may have contributed to these events, it is not known if they are related to Montelukast. Physicians should discuss these adverse experiences with their patients and/or caregivers. Patients and/or caregivers should be instructed to notify their physician if these changes occur.

The reduction in systemic corticosteroid dose in patients receiving antiasthma agents including leukotriene receptor antagonists has been followed in rare cases by the occurrence of one or more of the following: eosinophilia, vasculitic rash, worsening pulmonary symptoms, cardiac complications, and/or neuropathy sometimes diagnosed as Churg-Strauss syndrome, a systemic eosinophilic vasculitis. Although a casual relationship with leukotriene receptor antagonism has not been established, caution and appropriate clinical monitoring are recommended when systemic corticosteroid reduction is considered in patients receiving Montelukast.

Patients with known aspirin sensitivity should continue avoidance of aspirin or non-steroidal anti-inflammatory agents while taking Montelukast.

Although Montelukast is effective in improving airway function in asthmatics with documented aspirin sensitivity, it has not been shown to truncate bronchoconstrictor response to aspirin and other documented aspirin sensitivity.

Do not give Avalair 4mg chewable tablets to children less than 2 years of age. The safety and efficacy of Avalair 4mg chewable tablets in children less than 2 years of age has not been established.

Effects on ability to drive and use machines

Montelukast is not expected to affect a patient's ability to drive a car or operate machinery. However, in very rare cases, individuals have reported drowsiness or dizziness.

WARNING:

This product contains aspartame. It is unsuitable for phenylketonurics

PREGNANCY & LACTATION:

Pregnancy

The safety and efficacy of montelukast have not been determined in pregnant women. Rarely, congenital limb defects have been reported during postmarketing surveillance; however, causality has not been established. Due to the lack of human safety information, montelukast should be used in pregnant women only if the potential benefit outweighs the potential risk to the fetus.

Lactation

Lactation studies with montelukast in humans have not been conducted. Montelukast is excreted into the milk of lactating rats. Until further data are available, caution is advised if montelukast is used in nursing women.

Available evidence and/or expert consensus is inconclusive or is inadequate for determining infant risk when used during breastfeeding. Weigh the potential benefits of drug treatment against potential risks before prescribing this drug during breastfeeding.

SIDE EFFECT

Montelukast has been generally well tolerated. Side effects, which usually were mild, generally did not require discontinuation of therapy.

Cardiovascular Effects: palpitations, allergic granulomatosis angiitis (Systemic eosinophilia with vasculitis and a clinical presentation consistent

with Churg-Strauss . Symptoms may include eosinophilia, vasculitic rash, worsening pulmonary symptoms, cardiac complications and/or neuropathy)
Skin and subcutaneous tissue disorders: angioedema, bruising, erythema nodosum, atopic dermatitis, eczema, infection of skin and/or subcutaneous tissue, rash, urticaria

Gastrointestinal Effects: abdominal pain, dental pain, diarrhea, gastroenteritis, indigestion, infection of tooth, nausea, pancreatitis, tonsillitis, vomiting

Hematologic Effects: blood coagulation disorder (increased bleeding tendency)

Hepatic Effects: ALT/ AST levels raised, cholestatic hepatitis

Immunologic Effects: hypersensitivity reactions, including anaphylaxis, varicella, and viral infection

Neurologic Effects: asthenia, disorientated, dizziness, headache, hyperactive behavior, hypesthesia, insomnia,

paresthesia, seizure, sinus headache, drowsiness, and tremor

Ophthalmic Effects: conjunctivitis, myopia

Otic Effects: Otolgia, Otitis, Otitis media

Psychiatric Effects: aggressive behavior, agitation, altered behavior, anxiety, depression, dream disorder, feeling nervous, hallucinations, irritability, nightmares, restlessness, sleep disorder, somnambulism, suicidal thinking and behavior (including suicide)

Renal Effects: pyuria

Respiratory Effects: bronchitis, acute cough, epistaxis, laryngitis, nasal congestion, nasal discharge, pharyngitis, pneumonia, respiratory tract infection, rhinitis, sinusitis, upper respiratory infection, wheezing

Musculoskeletal and connective tissue disorders: arthralgia, myalgia including muscle cramps

Other: fatigue, fever, influenza, malaise, traumatic injury

Postmarketing experience:

Blood and lymphatic system disorders: thrombocytopenia.

Psychiatric disorders: Obsessive-compulsive symptoms.

DRUG INTERACTIONS:

Montelukast may be administered with other therapies routinely used in the prophylaxis and chronic treatment of asthma, and in the treatment of allergic rhinitis.

Montelukast is not anticipated to alter the metabolism of drugs metabolized by this enzyme (e.g., paclitaxel, rosiglitazone, repaglinide). Concurrent use of gemfibrozil and montelukast may result in elevated montelukast plasma concentrations

Concurrent use of prednisone and montelukast may result in severe peripheral edema.

Concurrent use of montelukast and repaglinide may result in increased repaglinide plasma concentrations.

Montelukast is metabolised by CYP 3A4, caution should be exercised, particularly in children, when montelukast is co-administered with inducers of CYP 3A4, such as phenytoin, phenobarbital and rifampicin.

Concurrent use of montelukast and phenobarbital may result in decreased bioavailability of montelukast.

Concurrent use of montelukast and rifampin may result in decreased bioavailability of montelukast.

OVERDOSAGE:

Symptoms

Symptoms included abdominal pain, somnolence, thirst, headache, vomiting, and psychomotor hyperactivity.

Treatment

Treatment is symptomatic and supportive. Treatment may include removal of unabsorbed material from the gastrointestinal tract, clinical monitoring and supportive therapy if required.

It is not known if montelukast can be removed by peritoneal dialysis or hemodialysis.

STORAGE:

Store below 30°C. Protect from light and moisture. Keep out of reach of children.

PACKING:

Pack of 4 x 7's tablets, in a box of 4 pieces of Alu/Alu blister packs of 7 tablets.

Product Registration Holder:

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Malaysia Registration No. MAL18116130ACZ

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