Salbutamol sulphate

Ventolin®

2mg Tablet

PRODUCT DESCRIPTION

Each white, circular, flat faced tablet with bevelled edges, engraved on one face with “GX/CN3” contains 2mg salbutamol, as sulphate.

PHARMACOLOGICAL PROPERTIES

Pharmacodynamics

Salbutamol is a selective beta-$_2$ adrenoceptor agonist. At therapeutic doses it acts on the beta-$_2$ adrenoceptors of bronchial muscle providing short acting (4 to 6 hour) bronchodilation in reversible airways obstruction.

Pharmacokinetics

Salbutamol administered intravenously has a half-life of 4 to 6 hours and is cleared partly renally and partly by metabolism to the inactive 4'-O-sulphate (phenolic sulphate) which is also excreted primarily in the urine. The faeces are a minor route of excretion. The majority of a dose of salbutamol given intravenously, orally or by inhalation is excreted within 72 hours. Salbutamol is bound to plasma proteins to the extent of 10%.

After oral administration, salbutamol is absorbed from the gastrointestinal tract and undergoes considerable first-pass metabolism to the phenolic sulphate. Both unchanged drug and conjugate are excreted primarily in the urine. The bioavailability of orally administered salbutamol is about 50%.

Pre-clinical Safety Data

In common with other potent selective beta-$_2$ receptor agonists, salbutamol has been shown to be teratogenic in mice when given subcutaneously. In a reproductive study, 9.3% of foetuses were found to have cleft palate, at 2.5mg/kg, 4 times the maximum human oral dose. In rats, treatment at the levels of 0.5, 2.32, 10.75 and 50mg/kg/day orally throughout pregnancy resulted in no significant foetal abnormalities. The only toxic effect was an increase in neonatal mortality at the highest dose level as the result of lack of maternal care. A reproductive study in rabbits revealed cranial malformations in 37% of foetuses at 50mg/kg/day, 78 times the maximum human oral dose.

Reproduction studies in rats demonstrated no evidence of impaired fertility at oral doses of Salbutamol (*Ventolin*®) up to 50 mg/kg.

INDICATIONS

Salbutamol (*Ventolin*®) is a selective beta-$_2$ adrenoceptor agonist indicated for the treatment or prevention of bronchospasm. It provides short acting bronchodilation in reversible airways obstruction due to asthma, chronic bronchitis and emphysema.

Bronchodilators should not be the only or main treatment in patients with persistent asthma. In patients with persistent asthma unresponsive to Salbutamol (*Ventolin*®), treatment with inhaled corticosteroids is recommended to achieve and maintain control. Failing to respond to treatment with Salbutamol (*Ventolin*®) may signal a need for urgent medical advice or treatment.

Salbutamol (*Ventolin*®) tablets are indicated for the relief of bronchospasm in bronchial asthma of all types, chronic bronchitis and emphysema.

DOSAGE AND ADMINISTRATION

Salbutamol (*Ventolin*®) has a duration of action of 4 to 6 hours in most patients.

Increasing use of β_2 agonists may be a sign of worsening asthma. Under these conditions a reassessment of the patient's therapy plan may be required and concomitant glucocorticosteroid therapy should be considered.

As there may be adverse effects associated with excessive dosing, the dosage or frequency of administration should only be increased on medical advice.

- **Adults**

The usual effective dose is 4 mg (2 tablets) 3 or 4 times per day.

If adequate bronchodilation is not obtained each single dose may be gradually increased to as much as 8 mg (4 tablets).

Some patients obtain adequate relief with 2 mg (1 tablet) 3 or 4 times daily.

- **Children**

2 - 12 years	-	2 mg (1 tablet) 3 or 4 times daily.
Over 12 year	-	2 to 4 mg (1 to 2 tablets) 3 or 4 times daily.

- **Special patient groups**

In elderly patients or in those known to be unusually sensitive to beta-adrenergic stimulant drugs, it is advisable to initiate treatment with 2 mg (1 tablet) salbutamol 3 or 4 times per day.

CONTRAINDICATIONS

Salbutamol (*Ventolin*®) Tablets are contra-indicated in patients with a history of hypersensitivity to any of their components.

Non-i.v. formulations of VENTOLIN must not be used to arrest uncomplicated premature labour or threatened abortion.

WARNINGS AND PRECAUTIONS

The management of asthma should normally follow a stepwise programme, and patient response should be monitored clinically and by lung function tests.

Increasing use of short-acting inhaled beta-$_2$ agonists to control symptoms indicates deterioration of asthma control. Under these conditions, the patient's therapy plan should be reassessed. Sudden and progressive deterioration in asthma control is potentially life-threatening and consideration should be given to starting or increasing corticosteroid therapy. In patients considered at risk, daily peak flow monitoring may be instituted.

Patients should be warned that if either the usual relief is diminished or the usual duration of action reduced, they should not increase the dose or its frequency of administration, but should seek medical advice.

Salbutamol (*Ventolin*®) should be administered cautiously to patients with thyrotoxicosis.

Potentially serious hypokalaemia may result from beta-$_2$ agonist therapy mainly from parenteral and nebulised administration. Particular caution is advised in acute severe asthma as this effect may be potentiated by concomitant treatment with xanthine derivatives, steroids, diuretics and by hypoxia. It is recommended that serum potassium levels are monitored in such situations.

In common with other beta-adrenoceptor agonists, Salbutamol (*Ventolin*®) can induce reversible metabolic changes, for example increased blood sugar levels. The diabetic patient may be unable to compensate for this and the development of ketacidosis has been reported. Concurrent administration of corticosteroids can exaggerate this effect.

Effects on Ability to Drive and Use Machines

None reported

DRUG INTERACTIONS

Salbutamol (*Ventolin*®) and non-selective beta-blocking drugs, such as propranolol, should not usually be prescribed together.

Salbutamol (*Ventolin*®) is not contra-indicated in patients under treatment with monoamine oxidase inhibitors (MAOIs).

PREGNANCY AND LACTATION

Fertility

There is no information on the effects of salbutamol on human fertility. There were no adverse effects on fertility in animals (see Pre-clinical Safety Data).

Pregnancy

Administration of drugs during pregnancy should only be considered if the expected benefit to the mother is greater than any possible risk to the foetus.

During worldwide marketing experience, rare cases of various congenital anomalies, including cleft palate and limb defects have been reported in the offspring of patients being treated with salbutamol. Some of the mothers were taking multiple medications during their pregnancies. As no consistent pattern of defects can be discerned, and baseline rate for congenital anomalies is 2 to 3%, a relationship with salbutamol use cannot be established.

Lactation

As salbutamol is probably secreted in breast milk its use in nursing mothers is not recommended unless the expected benefits outweigh any potential risk.

It is not known whether salbutamol in breast milk has a harmful effect on the neonate.

ADVERSE EFFECTS

Adverse reactions are listed below by system organ class and frequency. Frequencies are defined as: very common (≥1/10), common (≥1/100 to <1/10), uncommon (≥1/1000 to <1/100), rare (≥1/10,000 to <1/1000) and very rare (<1/10,000) including isolated reports. Very common and common reactions were generally determined from clinical trial data. Rare and very rare reactions were generally determined from spontaneous data.

Immune system disorders

Very rare: Hypersensitivity reactions including angioedema, urticaria, bronchospasm, hypotension and collapse.

Metabolism and nutrition disorders

Rare: Hypokalaemia.

Potentially serious hypokalaemia may result from beta-$_2$ agonist therapy.

Nervous system disorders

Very common: Tremor.
Common: Headache.
Very rare: Hyperactivity.

Cardiac disorders

Common: Tachycardia, palpitations.
Rare: Cardiac arrhythmias including atrial fibrillation, supraventricular tachycardia and extrasystoles.

Vascular disorders

Rare: Peripheral vasodilatation.

Musculoskeletal and connective tissue disorders

Common: Muscle cramps.
Very rare: Feeling of muscle tension.

OVERDOSAGE AND TREATMENT

The most common signs and symptoms of overdose with Salbutamol (*Ventolin*®) are transient beta agonist pharmacologically mediated events (see Warnings and Precautions and Adverse Reactions).

Hypokalaemia may occur following overdose with Salbutamol (*Ventolin*®). Serum potassium levels should be monitored.

Lactic acidosis has been reported in association with high therapeutic doses as well as overdoses of short-acting beta-agonist therapy, therefore monitoring for elevated serum lactate and consequent metabolic acidosis (particularly if there is persistence or worsening of tachypnea despite resolution of other signs of bronchospasm such as wheezing) may be indicated in the setting of overdose.
Nausea, vomiting and hyperglycaemia have been reported, predominantly in children and when salbutamol overdose has been taken via the oral route.

Treatment

Further management should be as clinically indicated or as recommended by the national poisons centre, where available.

STORAGE CONDITIONS

Store at temperatures not exceeding 30°C.

AVAILABILITY

Salbutamol (*Ventolin*®) 2mg Tablet: 10 tablets per foil strip (box of 100s).

CAUTION

Foods, Drugs, Devices and Cosmetics Act prohibits dispensing without prescription.
Keep all medicines out of reach of children.

Version number: GDS21/IPI06 Revision date: 05 Feb 2014

GlaxoSmithKline

Imported by:
GlaxoSmithKline Philippines Inc
2266 Chino Roces Avenue, City of Makati
Tel. 892-0761

Mfd by:
Aspen Bad Oldesloe GmbH
Bad Oldesloe, Germany

PH/SAL/0044/15
August 2015
For Healthcare Professionals Only