SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Salbutamol 2.5 mg/2.5 ml nebuliser Solution

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ampoule contains Salbutamol Sulfate equivalent to 2.5 mg of salbutamol (1 mg/ml).

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Nebuliser Solution.

4. CLINICAL PARTICULARS

4.1. Therapeutic indications

Salbutamol Nebuliser is indicated in adults, adolescents and children, see section 4.2.

Salbutamol is a selective β2-agonist providing short-acting (4-6 hour) bronchodilation with a fast onset (within 5 minutes) in reversible airways obstruction.

Salbutamol Nebuliser is indicated for use in the routine management of chronic bronchospasm unresponsive to conventional therapy and the treatment of acute severe asthma.

4.2. Posology and method of administration

Posology

Salbutamol Solution is for inhalation use only, to be breathed in through the mouth, under the direction of a physician, using a suitable nebuliser.

The solution should not be injected or swallowed.

Adults:
The usual dose is 2.5 mg given up to three to four times a day by a nebuliser. This may be increased to 5 mg up to three to four times a day if necessary. Up to 40 mg per day can be given under strict medical supervision in hospital.

However, in domiciliary practice the benefits of increasing the dose of nebulised salbutamol sulfate should be weighted against the risk that a deterioration in the patients underlying condition may be masked. In such circumstances a medical assessment should be considered since alternative therapy may be indicated.

Paediatric Population

Children aged 12 years and over: Dose as per adult population.

Children aged 4 to 12 years: 2.5 mg to 5 mg up to four times a day.

Children 18 months to 4 years: 2.5 mg up to four times a day. The dose may be increased to 5 mg if necessary, but medical assessment should be considered since alternative therapy may be indicated.

Infants under 18 months old: 1.25 mg (0.25 mg/kg) to 2.5 mg up to four times a day. As transient hypoxaemia may occur supplemental oxygen therapy should be considered. Clinical efficacy of nebulised salbutamol in infants under 18 months is uncertain.

Other pharmaceutical forms may be more appropriate for administration in children under 4 years old.

Older People: The same dosage as for other adults.

Delivery of the aerosol may be by face mask or 'T' piece.

Salbutamol Nebuliser should be used undiluted. However, if a delivery time in excess of 10 minutes is required they should be diluted with Sodium Chloride Injection BP.

Private purchase of nebuliser devices for use at home to deliver rescue therapy for the acute treatment of asthma in children and adolescents is not recommended.

Only specialists in respiratory medicine should initiate and clinically manage use of nebulisers and associated nebulised medicines at home for acute treatment of asthma in children and adolescents.

Children should be trained in the correct use of their device to deliver rescue therapy and use should be supervised by a responsible adult.

Urgent medical assistance should be sought if worsening asthma symptoms are not relieved by rescue medicines, even if there is short-term recovery following use of prescribed nebulised medication.

4.3. Contraindications

Hypersensitivity to the active substance(s) or to any of the excipients listed in section 6.1.

Although some forms of salbutamol sulfate have been used for the management of premature labour, Salbutamol Nebuliser should not be used for this purpose.

Salbutamol Nebuliser should not be used in threatened abortion.

4.4. Special warnings and precautions for use

Salbutamol Solution is for use with a nebuliser under the direction of a physician. The solution should not be injected or administered orally. Patients who use Salbutamol Nebuliser at home should be warned that if their usual dose is less effective or its duration of action reduced they should not increase either the dose or frequency of treatment but should consult their doctor.

Bronchodilators should not be the only or main treatment in patients with severe or unstable asthma. Severe asthma requires regular medical assessment, including lung function testing, as patients are at risk of severe attacks and even death. Physicians should consider using the maximum recommended dose of inhaled corticosteroid and/or oral corticosteroid therapy in these patients.

Patients who are prescribed regular anti-inflammatory therapy (e.g., inhaled corticosteroids) should be advised to continue taking their anti-inflammatory medication even when symptoms decrease, and they do not require Salbutamol Nebuliser.

Patients being treated with Salbutamol Nebuliser may also be receiving other dosage forms of short-acting inhaled bronchodilators to relieve symptoms. Increasing use of bronchodilators, in particular short-acting inhaled β2-agonists to relieve symptoms, indicates deterioration of asthma control, and patients should be warned to seek medical advice as soon as possible. The patient should be instructed to seek medical advice if short-acting relief bronchodilator treatment becomes less effective or more inhalations than usual are required. In this situation patients should be assessed and consideration given to the need for increased anti-inflammatory therapy (e.g. higher doses of inhaled corticosteroid or a course of oral corticosteroid).

Overuse of short-acting beta-agonists may mask the progression of the underlying disease and contribute to deteriorating asthma control, leading to an increased risk of severe asthma exacerbations and mortality.

Patients who take more than twice a week “as needed” salbutamol, not counting prophylactic use prior to exercise, should be re-evaluated (i.e., daytime symptoms, night-time awakening, and activity limitation due to asthma) for proper treatment adjustment as these patients are at risk for overuse of salbutamol.

Severe exacerbations of asthma must be treated in the normal way.

The use of nebulised anticholinergic agents and nebulised salbutamol sulfate in combination has been reported to precipitate acute angle closure glaucoma. This combination should be used with caution when giving nebuliser therapy to patients with actual or potential glaucoma.

The patient should receive adequate instruction in correct administration and be warned not to allow the solution or mist to enter the eyes.

Salbutamol Nebuliser should be used with caution in patients with thyrotoxicosis or in patients known to have received large doses of other sympathomimetic drugs, including Salbutamol.

Cardiovascular effects may be seen with sympathomimetic drugs, including salbutamol. There is some evidence from post-marketing data and published literature of rare occurrences of myocardial ischaemia associated with salbutamol. Patients with underlying severe heart disease (e.g. ischaemic heart disease, arrhythmia or severe heart failure) who are receiving

salbutamol should be warned to seek medical advice if they experience chest pain or other symptoms of worsening heart disease. Attention should be paid to assessment of symptoms such as dyspnoea and chest pain, as they may be of either respiratory or cardiac origin.

In common with other β-adrenoceptor agonists, salbutamol can induce reversible metabolic changes such as increased blood glucose levels. Diabetic patients may be unable to compensate for the increase in blood glucose and the development of ketoacidosis has been reported. Concurrent administration of corticosteroids can exaggerate this effect.

Lactic acidosis has been reported in association with high therapeutic doses of intravenous and nebulised short-acting β-agonist therapy, mainly in patients being treated for an acute asthma exacerbation (see Section 4.8). Increase in lactate levels may lead to dyspnoea and compensatory hyperventilation, which could be misinterpreted as a sign of asthma treatment failure and lead to inappropriate intensification of short-acting β-agonist treatment. It is therefore recommended that patients are monitored for the development of elevated serum lactate and consequent metabolic acidosis in this setting.

As with other inhalation therapy, the potential for paradoxical bronchospasm should be considered. If it occurs the preparation should be discontinued immediately and alternative therapy given. Solutions which are not of neutral pH may rarely cause paradoxical bronchospasm in some patients. Salbutamol and non-selective beta blocking drugs such as propranolol should not usually be prescribed together.

Potentially serious hypokalaemia may result from β2 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.

4.5. Interaction with other medicinal products and other forms of interaction

Beta2-agonists and non-selective beta-blocking drugs such as propranolol should not be prescribed together. Hypokalaemia occurring with β2-agonist therapy may be exacerbated by treatment with xanthine derivatives, steroids and diuretics (see section 4.4).

4.6. Fertility, pregnancy and lactation

Pregnancy

Administration of drug during pregnancy should only be considered if the expected benefit to the mother is greater than any possible risk to the foetus. Salbutamol has been in widespread use for many years in human beings without apparent ill consequence; this includes its well established use in the management of premature labour. However, as with the majority of drugs, there is little published evidence of its safety in the early stages of human pregnancy but in animal studies there was evidence of some harmful effects on the foetus at very high dose levels.

Breast-feeding

As salbutamol is probably secreted in breast milk its use in nursing mothers requires careful consideration. It is not known whether salbutamol has a harmful effect on the neonate and so its use should be restricted to situations where it is felt that the expected benefit to the mother is likely to outweigh any potential risk to the neonate.

Fertility
There is no information on the effects of salbutamol on human fertility.

4.7. Effects on ability to drive and use machines

Salbutamol Nebuliser has no or negligible influence on the ability to drive and use machines.

4.8. Undesirable effects

Adverse events are listed below by system organ class and frequency.
Frequencies are defined as: Very common (≥ 1/10), Common (≥1/100 to <1/10), Uncommon (≥1/1,000 to <1/100), Rare (≥1/10,000 to <1/1,000) and Very rare (<1/10,000). Very common and Common events were generally determined from clinical trial data. Rare, Very rare and not known events 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 beta2 agonist therapy
Not known: Lactic acidosis (see section 4.4)

Nervous system disorders
Common: Tremor, headache
Very rare: Hyperactivity (especially in children)

Cardiac disorders
Common: Tachycardia
Uncommon: Palpitations
Very rare: Cardiac arrhythmias including atrial fibrillation, supraventricular tachycardia and extrasystoles
Not known: Myocardial ischaemia* (see section 4.4)

Vascular disorders
Rare: Peripheral vasodilatation

Respiratory, thoracic and mediastinal disorders
Very rare: Paradoxical bronchospasm

As with other inhalation therapy, paradoxical bronchospasm may occur with an immediate increase in wheezing after dosing. This should be treated immediately with an alternative presentation or a different fast-acting inhaled bronchodilator. Salbutamol Nebuliser should be discontinued immediately, the patient assessed, and, if necessary, alternative therapy instituted.

Gastrointestinal disorders
Uncommon: Mouth and throat irritation

Musculoskeletal and connective tissue disorders
Uncommon: Muscle cramps.

* reported spontaneously in post-marketing data therefore frequency regarded as unknown.

Reporting of suspected adverse reactions
Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9. Overdose

The most common signs and symptoms of overdose with salbutamol are transient beta agonist pharmacologically mediated events, including tachycardia, tremor, hyperactivity and metabolic effects including hypokalaemia and lactic acidosis (see sections 4.4 and 4.8).

Hypokalaemia may occur following overdose with salbutamol. Serum potassium levels should be monitored.

Consideration should be given to discontinuation of treatment and appropriate symptomatic therapy such as cardio-selective beta-blocking agents in patients presenting with cardiac symptoms (e.g. tachycardia, palpitations). Beta-blocking drugs should be used with caution in patients with a history of bronchospasm.

5. PHARMACOLOGICAL PROPERTIES

5.1. Pharmacodynamic properties

Pharmacotherapeutic group: Selective β2 Adrenoreceptor Agonists, ATC code: R03AC02

Salbutamol is a selective β2-agonist providing short-acting (4-6 hour) bronchodilatation with a fast onset (within 5 minutes) in reversible airways obstruction. At therapeutic doses it acts on the β2-adrenoceptors of bronchial muscle. With its fast onset of action, it is particularly suitable for the management and prevention of attack in asthma.

5.2. Pharmacokinetic properties

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. Most 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 administration by the inhaled route, between 10 and 20% of the dose reaches the lower airways. The remainder is retained in the delivery system or is deposited in the oropharynx from where it is swallowed. The fraction deposited in the airways is absorbed into the pulmonary tissues and circulation, but is not metabolised by the lung. On reaching the

systemic circulation it becomes accessible to hepatic metabolism and is excreted, primarily in the urine, as unchanged drug and as the phenolic sulphate.

The swallowed portion of an inhaled dose 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.

5.3. Preclinical safety data

There are no preclinical data of relevance to the prescriber which are additional to that already including in other sections of the SPC.

6. PHARMACEUTICAL PARTICULARS

6.1. List of excipients

Sodium Chloride
Dilute Sulfuric Acid
Water for Injections

6.2. Incompatibilities

None Known.

6.3. Shelf life

24 months.

6.4. Special precautions for storage

Do not store above 25°C. Do not refrigerate or freeze. Protect from light.

6.5. Nature and contents of container

A unit dose blow moulded hermetically sealed plastic ampoule containing 2.5 ml of solution. Strips of 5 ampoules are packed into foil laminate pouches which are then packed into boxes. Salbutamol 2.5 mg Nebuliser Solution is available in boxes containing 20 and 100 ampoules.

Not all pack sizes may be marketed.

6.6. Special precautions for disposal and other handling

Salbutamol 2.5 mg Nebuliser Solution should be administered from a power operated nebuliser via a face mask or mouthpiece.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Teva UK Limited
Ridings Point
Whistler Drive
Castleford
WF10 5HX
United Kingdom

8. MARKETING AUTHORISATION NUMBER

PL 00289/2574

9. DATE OF FIRST AUTHORISATION/RENEWAL OF AUTHORISATION

1st January 2004

10. DATE OF REVISION OF THE TEXT

19/01/2024