1. NAME OF THE MEDICINAL PRODUCT

Avro Allergy Relief plus Syrup

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 5ml syrup contains:

Diphenhydramine Hydrochloride 12.5 mg
Phenylephrine Hydrochloride 5 mg

For a full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Oral solution.

Clear and reddish liquid

4. Clinical particulars

4.1 Therapeutic indications

- Temporarily relieves these symptoms due to hay fever or other upper respiratory allergies:
  - ✓ runny nose
  - ✓ sneezing
  - ✓ itchy, watery eyes
  - ✓ itching of the nose or throat
  - ✓ nasal congestion
  - ✓ stuffy nose
- Temporarily relieves these symptoms due to the common cold:
  - ✓ runny nose
  - ✓ sneezing
  - ✓ nasal congestion
  - ✓ stuffy nose
- Temporarily relieves sinus congestion and pressure

4.2 Posology and method ofadministration

Posology
CHILDREN:
4-5 years: Do not use unless directed by a physician.
6-11 years: 5ml every 4 hours
Under 4 years; Do not use
ADULTS AND CHILDREN ABOVE 12 YEARS: 10ml every 4 hours

Do not take more than 6 doses in 24 hours.

If symptoms persist consult your doctor.

Method of administration
For oral administration.

4.3 Contraindications

- Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.
- Children below 4 years of age
- Patients with hepatic impairment or urinary retention
- In acute attacks of asthma
- Patients with hyperthyroidism and hypertension, cardiovascular and coronary disease
- Patients being treated with monoamine oxidase inhibitors or within fourteen days of stopping such treatment.

- patients with glaucoma and patients who are currently receiving other sympathomimetic drugs
- Chronic alcoholics or patients on sedatives since it potentiates the drowsiness effect.

4.4 Special warnings and precautions for use

- Patients with the following conditions should be advised to consult a physician before using this medicine:
    - A chronic or persistent cough such as occurs with emphysema or chronic bronchitis, acute or chronic asthma, or where cough is accompanied by excessive secretions
    - Susceptibility to angle-closure glaucoma
    - Prostatic hypertrophy and/or urinary retention
- Diphenhydramine may enhance the sedative effects of central nervous system depressants including alcohol, sedatives, opioid analgesics, antipsychotics and tranquilizers.
- Do not use with any other product containing diphenhydramine, including topical formulations used on large areas of skin.
- Patients with hepatic disease or moderate to severe renal dysfunction should exercise caution when using this product.
- The product may cause drowsiness, if affected, do not drive or operate machinery.
- This product should not be used to sedate a child.

4.5 Interaction with other medicinal products and other forms of interaction

Diphenhydramine

CNS depressants: may enhance the sedative effects of CNS depressants including barbiturates, hypnotics, opioid analgesics, anxiolytic sedatives, antipsychotics and alcohol.

Antimuscarinic drugs: may have an additive muscarinic action with other drugs, such as atropine and some antidepressants giving rise to tachycardia, mouth dryness, gastrointestinal disturbances e.g. colic, urinary retention and headache.

MAOIs: Not to be used in patients taking MAOIs or within 14 days of stopping treatment as there is a risk of serotonin syndrome.

Phenylephrine

Adrenergic blockers: Phenylephrine reverses the antihypertensive effects of current antihypertensive therapy with adrenergic blockers such as guanethidine and reserpine with the risk of severe hypertension.

MAOI and tricyclic antidepressants: The action of phenylephrine may be enhanced by MAOI and tricyclic antidepressants resulting in hazardous hypertensive effects.

Anaesthetics: Hazardous arrhythmias are a risk if phenylephrine is used in patients anaesthesised with cyclopropane, halothane or other volatile anaesthetics that sensitise the myocardium to its adrenergic effects.

Ergot alkaloids and oxytocin: The vasoconstrictor and pressor effects of phenylephrine may be enhanced by drugs with similar effects such as ergot alkaloids or oxytocin.

4.6 Pregnancy and Lactation

This product should not be used during pregnancy or breastfeeding except under close medical supervision.

4.7 Effects on ability to drive and use machines

Drowsiness may be experienced during treatment with this product and patients are advised not to drive or operate machinery if affected.

In sensitive patients, concurrent use with alcohol or other CNS depressants may cause additional reductions in alertness and impairment of performance.

4.8 Undesirable effects
Side effects are rare and usually mild. The most reported being sedation and CNS depression including dizziness, lassitude, blurred vision and incoordination, which may diminish after few days of treatment. Concurrent ingestion of alcohol or other CNS depressants produce an additive effect that impairs motor skills.
Other side effects include gastrointestinal disturbances like loss of appetite, nausea, vomiting, epigastric pain, constipation or diarrhoea and their incidence might be reduced by giving the drug with meals. Hypersensitivity reactions and rashes may also occur but are less common.

Antimuscarinic effects like dry mouth, thickened respiratory tract secretions, urinary retention or frequency, dysuria, increased gastric reflux may also occur.

4.9 Overdose
Symptoms
Overdosage may lead to tachycardia or reflex bradycardia, hypertension and an irritant effect on the gastric mucosa causing nausea, vomiting and diarrhoea.

Treatment
Immediate medical advice should be sought in the event of an overdose, even if you feel well.
Treatment consists of supportive measures, gastric lavage, as well as correction of any fluid or electrolyte imbalance. In cases of severe hypertension, intravenous phentolamine may be required.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Diphenhydramine, combinations

ATC Code: R06AA52

Diphenhydramine hydrochloride
Diphenhydramine hydrochloride is an ethanolamine derivative with the properties and use of antihistamine. It is less potent than promethazine hydrochloride but has a shorter duration of action. It has sedative, anti-emetic, anticholinergic and local anaesthetic properties.
Diphenhydramine hydrochloride is a histamine H1-receptor antagonist. It has action on the contraction of smooth muscle and the dilatation and increased permeability of the capillaries. It also has anticholinergic activity.

Phenylephrine hydrochloride
Phenylephrine hydrochloride is a sympathomimetic agent with mainly direct effects on adrenergic receptors. It has predominantly α-adrenergic activity and is used to elicit sympathetic responses (vasoconstriction) where there is congestion and inflammation of the nasal mucosa.
Phenylephrine is without significant stimulating effects on central nervous system at usual doses. It activates beta-adrenergic receptors only at much higher concentrations. Its pressor activity is weaker than that of noradrenaline but of longer duration.
It is used as a nasal decongestant. It acts by decreasing resistance to airflow by decreasing the volume of the nasal mucosa. This may occur by activation of alpha adrenergic receptors in venous capacitance vessels in nasal tissues that have erectile characteristics.
It reduces intestinal tone and motility, causes bronchodilatation and relaxes the bladder wall. It has stimulant activity on the respiratory centre.

5.2 Pharmacokinetic properties
Diphenhydramine hydrochloride
Diphenhydramine is well absorbed from the GIT although first pass metabolism appears to affect systemic availability. Peak plasma concentrations are achieved about 1 – 4 hours after oral administration.

It is widely distributed throughout the body including the CNS. It crosses the placenta and has been detected in breast milk.

Metabolism is extensive. It is metabolized by the liver and excreted mainly in the urine as metabolites; Any unchanged diphenhydramine is eliminated more rapidly than its metabolites. little is excreted as unchanged drug.

It has been reported to be 98% bound to plasma proteins with a normal half-life of 4 to 7 hours. Elimination ranges from 2.4 – 9.3 hours.

Phenylephrine hydrochloride
Phenylephrine Hydrochloride is absorbed from the gastrointestinal tract and has low oral bioavailability owing to irregular absorption and first-pass effect metabolism by monoamine oxidase in the gut and liver. It has been shown to accumulate to toxic concentrations in children with renal tubular acidosis.

5.3 Preclinical safety data
There are no pre-clinical data of relevance to the prescriber which are additional to that already included in other sections of the SPC.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients
Citric Acid
Sodium Carboxymethyl Cellulose
Sodium Citrate
FD & C Red No. 40
Glycerol
Sodium Benzoate
Sorbitol Solution
Sucrose
Raspberry Flavour
Deionised Water

6.2 Incompatibilities
Not applicable.

6.3 Shelf life
3 years.

6.4 Special precautions for storage
Store below 30°C.
Protect from light. Keep tightly closed.

6.5 Nature and contents of container
Amber Pet bottle with aluminium screw cap in outer carton.
Pack size: 100ml.

6.6 Special precautions for disposal
No special requirements.

7 APPLICANT/MANUFACTURER
Avro Pharma Limited
Daid House Plot 2, Block J, Limca Way,
Isolo Industrial Estate, Oshodi-Apapa Expressway,
Isolo, Lagos State, Nigeria.
Tel: +234(1)2913955
Email: avro@rumon-org.com