

# PHARMACEUTICAL LIMITED

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# SUMMARY OF PRODUCT CHARACTERISTICS(SmPC)

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1.Name of the medicinal product

EMCEE VITAMIN C TABLET (WHITE) (Ascorbic Acid 100mg)

# 2. Qualitative and quantitative composition

Ascorbic Acid 100mg tablet:

Each tablet contains 100 mg Ascorbic Acid.

For the full list of excipients, see section 6.1.

# **3.Pharmaceutical form**

Tablet

White circular tablets

# **4.**Clinical particulars

# 4.1.Therapeutic indications

Vitamin C is indicated for the prevention and treatment of scurvy:

# 4.2. Posology and method of administration

# **Posology**

Adults and children over 6 years:

Prophylactic:25-75 mg daily.

Note: This unit dosage form is unsuitable for prophylactic use.

Therapeutie: Not less than250mg daily in divided doses. Maximum of 1000mg daily.

Children under 6 years:

This unit dosage form is unsuitable for children under 6 years.

*Elderly*: As for other adults. As the dietary intake of vitamin C may be less in the elderly, they have greater risk of presenting with vitamin C deficiency.

Method of administration

Ascorbic Acid is usually administered orally.

Adults (including elderly) For the treatment of Vitamin C deficiency: 300mg-1000mg daily in divided doses. For the prevention of Vitamin C deficiency: 100mg daily. Children (age 4 to 12 years). For the treatment of Vitamin C deficiency: 100mg-500mg.

For the prevention of Vitamin C deficiency: 100mg daily

# 4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1 Ascorbic acid should not be given to patients with hyperoxaluria.

# 4.4 Special warnings and precautions for use

Increased intake of ascorbic acid over a prolonged period may result in an increased renal clearance of ascorbic acid, and deficiency may result if the intake is reduced or withdrawn rapidly (see section 4.8).

## Interference with serological testing

Ascorbic acid may interfere with tests and assays for urinary glucose, giving false-negative results with methods utilising glucose oxidase with indicator (e.g. Labstix, Tes-Tape) and false-positive results with neocuproine methods.

Estimation of uric acid by phosphotungstate or uricase with copper reduction and measurement of creatinine in non-deproteinised serum may also be affected.

High doses of ascorbic acid may give false-negative readings in faecal occult blood tests.

Patients with rare hereditary problems of galactose intolerance, total lactase deficiencyor glucosegalactose malabsorption should not take this medicine.

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

Ascorbie acid increases the renal excretion of amphetamine. The plasma concentration of ascorbate is decreased by smoking and oral contraceptives.

Ascorbic acid increases the absorption of iron.

Concomitant administration of aspirin and ascorbic acid may interfere with absorption of ascorbie acid.Renal excretion of salicylate is not affected and does not lead to reduced anti-inflammatory effects of aspirin.

Concomitant administration of aluminium-containing antacids may increase urinary aluminium elimination. Concurrent administration of antacids and ascorbic acid is not recommended, especially in patients with renal insufficiency.

Co-administration with amygdalin (a complementary medicine) can cause cyanide toxicity.

Concurrent administration of ascorbic acid with desferrioxamine enhances urinary iron excretion. Cases of cardiomyopathy and congestive heart failure have been reported in patients with idiopathic haemochromatosis and thalassaemias receiving desferrioxamine who were subsequently given ascorbic acid. Ascorbic acid should be used with caution in these patients and cardiac function monitored.

Ascorbic acid may interfere with biochemical determinations of creatinine, uric acid and glucose in samples of blood and urine.

#### 4.6 Fertility, pregnancy and lactation

#### Pregnancy

For ascorbic acid no clinical data on exposed pregnancies are available. Animal studies do not indicate direct or harmful effects with respect to pregnancy, embryonal/foetal development, parturition or postnatal development. Pregnant women should exercise caution.

#### **Breast-feeding**

Ascorbic acid is excreted in breast milk. Though again caution should be exercised, no evidlence exists suggesting such excretion is hazardous to the infant.

#### 4.7 Effects on ability to drive and use machines

On the basis of the produet's pharmacodynamic profile and reported adverse events, ascorbie acid has no known effect on an individual's ability to drive or operate machinery.

## 4.8 Undesirable effects

Increased intake of ascorbic acid over a prolonged period may result in increased renal clearance of Nervascorbic acid, and deficiency may result if the intake is reduced or withdrawn rapidly. Doses of more than 600mg daily have a diuretic effect.

Gastrointestinal disorders: nausea, vomiting and stomach eramps. Large doses of ascorble acid may caus diarrhoea.

Skin and subcutancous tissue disorders: redness of skin.

Renal and arinary disorders: Patients known to be at risk of hyperoxaluria should not ingest ascorbie acid dloses exceeding lg daily as there may be increased urinary oxalate excretion. However, such risk has not been demonstrated in normal, non-hyper oxaluric individuals. Ascorbic acid has been implicated in precipitating haemolyticanaemia in certain individuals deficient of glucose-6-phosphate dehydrogenase.

## **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.

## 4.9 OverdoseSymptoms

At doses of over 3g per day unabsorbed ascorbic acid is mainly excreted unmetabolised in the faeces. Absorbed ascorbic acid additional to the body's needs is rapidly eliminated. Large doses of ascorbic acid may cause diarrhoea and the formation of renal oxalate calculi. Symptomatic treatment may be required.

Ascorbic acid may cause acidosis or haemolytic anaemia in certain individuals with a deficiency of glucose

6-phosphate dehydrogenase.Renal failure can occur with massive ascorbic acid overdosage.

## Management

Gastric lavage may be given if ingestion is recent otherwise general supportive measure should be employed as required.

## **5.**Pharmacological properties

## 5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Vitamins-Ascorbic acid (vitamin C), plain

## ATC code: A11GA01

Ascorbic acid, coupled with dehydroascorbic acid to which it is reversibly oxidised, has a variety of functions in cell<sub>L</sub> Ascorbic acid additional to the body's needs, generally amounts above 200mg daily, is rapidly eliminated; unmnetabolised<sub>1</sub>

of  $p_{ascorbic}$  acid and its inactive metabolic products are chiefly excreted in the urine. The amount of ascorbic acid excreted heal

dopiunchanged in the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-dependent and may be accompanied by mild diuresis to the urine is dose-

storage organs. There is evidence that ascorbic acid is required for normal leucocyte functions and that it participates in the detoxification of numerous foreign substances by the hepatic microsomal system. Deficiency of ascorbic acid leads to scurvy, which may be manifested by weakness, fatigue, dyspnoea, aching bones, perifollicular hyperkeratosis, petechia and ecchymosis, swelling and bleeding of the gums, hypochromic anaemia and other haematopoietic disorders, together with reduced resistance to infections and impaired wound healing.

## 5.2 Pharmacokinetic properties

#### **Absorption**

#### Distribution

Ascoubic acid is widely distributed to all tissues. Body stores of ascorbie acid normally are about 1.5g The concentration is higher in leacocytes and platelets than in erythrocytes and plasma

Elimination

#### 5.3 Preclinical safety data

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

#### 6.Pharmaceutical particulars

#### 6.I List of excipients

| Starch                |
|-----------------------|
| Lactose               |
| Gelatin               |
| Sodium Metabisulphite |
| Gelatin               |
| Sodium EDTA           |

Talcum

6.2 Incompatibilitics

6.3 Shelf life

3.years

# 6.4 Special precautions for storage

Plastic containers: Keep the container tightly closed to protect from light and mobare

Store this medicine at temperature below 30 C and keep away from children.

## 6.5 Nature and contents of container

Plastic jar of 100 tablets and 1000 Tablets

## 6.6 Special precautions for disposal and other handling

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

## 7 Marketing authorization holder

Emron Pharmaceutical Limited.

5, Ojeikere Street, Off Itele Ota Road,

Harmony Estate, Ogun State.

## Manufactured By:

Funag Pharmaceutical Limited.

15, Funag Road, Iboko Village Ishasi - Akute, Ogun State.

## **8.0 NAFDAC REGISTRATION NUMBER:**

Waiting for approval.