Summary of Product Characteristics

1 NAME OF THE MEDICINAL PRODUCT

Folic Acid 2.5mg/5ml Oral Solution

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Folic Acid 2.5mg/5ml

Excipients:
Methyl hydroxybenzoate (E218)
Ethyl hydroxybenzoate (E214)
Propyl hydroxybenzoate (E216)
Phenylalanine

For full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Oral Solution.
A clear, yellow, solution with a strawberry flavour and odour.

4 CLINICAL PARTICULARS

4.1 Therapeutic Indications

1. Folate deficient megaloblastic anaemia
2. Folate deficient megaloblastic anaemia in infants
3. Treatment of folate deficiency in malabsorption syndromes (parenteral administration of folic acid may need to be considered if oral treatment is not effective)
   3.1 Tropical sprue. Tropical sprue responds to folate supplements in the early stages of the disease but cobalamin status must also be checked, particularly later.
   3.2 Coeliac disease. The necessity of supplementation with folate ceases once a gluten free diet is introduced.
   3.3 Non-tropical sprue. In congenital folate malabsorption, oral treatment may not be effective and parental folate may therefore be required.
4. Megaloblastic anaemia in pregnancy
5. Megaloblastic anaemia associated with alcoholism
6. Megaloblastic anaemia associated with anti-convulsant therapy
7. Folic acid deficiency/megaloblastic anaemia associated with haemolytic anaemia e.g. Sickle Cell Anaemia

4.2 Posology and method of administration

For oral administration only.

Children (persons aged 12 years and younger):
May be given 5 mg to 15 mg daily, in divided doses, according to the severity of the deficiency state.

Adults:
Initial dose of 10 mg to 20 mg daily, in divided doses, for 14 days or until a haemopotoietic response has been obtained.

Maintenance dose is 2.5 mg to 10 mg daily.

Prophylactic dose in pregnancy 0.5 mg (1ml) daily.

Elderly:

As for adults.

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.
Patients with malignant disease, unless megaloblastic anaemia due to folic acid deficiency.

4.4 Special warnings and precautions for use

Folic acid should not be administered for treatment of pernicious anaemia or undiagnosed megaloblastic anaemia without sufficient amounts of cyanocobalamin (vitamin B_{12}) as folic acid alone will not prevent and may precipitate development of subacute combined degeneration of the spinal cord. Therefore a full clinical diagnosis should be made before initiating treatment.

Folate should not be routinely used in patients receiving coronary stents.

Caution should be exercised when administering folic acid to patients who may have folate dependent tumours.

Folic acid is removed by haemodialysis.

Contains methyl- ethyl- and propyl- p-hydroxybenzoates; may cause allergic reactions (possibly delayed).

Contains 0.75 mmol (or 17.4mg) sodium per 20 ml dose, and is therefore essentially 'sodium-free'.

Contains phenylalanine. May be harmful for people with phenylketonuria.

4.5 Interaction with other medicinal products and other forms of interactions

Absorption of folic acid may be reduced by sulfasalazine.

Concurrent administration with cholestyramine may interfere with folic acid absorption. Patients on prolonged cholestyramine therapy should take folic acid 1 hour before or 4 to 6 hours after receiving cholestyramine.

Antibiotics may interfere with the microbiological assay for serum and erythrocyte folic acid concentrations and may cause falsely low results.

Trimethoprim or sulphonamides, alone or in combination as co-trimoxazole, may reduce the effect of folic acid and this may be serious in patients with megaloblastic anaemia.

Folic acid has been observed to reduce plasma levels of anticonvulsants, particularly phenytoin, phenobarbital and primidone and therefore patients should be carefully monitored by the physician and the anticonvulsant drug dose adjusted as necessary.

Fluorouracil toxicity may occur in patients taking folic acid and this combination should be avoided.

Edible clay or antacids containing aluminium or magnesium may reduce folic acid absorption. Patients should be advised to take antacids at least two hours after administration of folic acid.

Folic acid may reduce intestinal absorption of zinc (of particular importance in pregnancy).

4.6 Fertility, pregnancy and lactation

Pregnancy
Folic acid deficiency during pregnancy may lead to the appearance of foetal malformations. Imbalance in folate requiring trophoblast cells may also lead to detachment of the placenta.

Harmful effects in the human foetus, mother or the pregnancy have not been reported following ingestion of folic acid. Very high doses of folic acid have been shown to cause foetal abnormalities in rats.

Breastfeeding
Folic acid is excreted in breast milk. No adverse effects have been observed in breast-fed infants whose mothers were receiving folic acid.

4.7 Effects on ability to drive and use machines

There are no known effects of this preparation on the ability to drive or use machines.

4.8 Undesirable effects

Folic acid is generally well tolerated, although the following side effects have been reported:

Blood and lymphatic system disorders:
Folic acid may worsen the symptoms of co-existing vitamin B_{12} deficiency and should never be used to treat anaemia without a full investigation of the cause.

Immune system disorders:
Rare: Allergic reactions, comprising erythema, rash, pruritus, urticarial, dyspnoea, and anaphylactic reactions (including shock).

Gastrointestinal disorder:
Abdominal distension, flatulence, anorexia and nausea.

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 HPRA Pharmacovigilance, Earlsfort Terrace, IRL - Dublin 2; Tel: +353 1 6764971; Fax: +353 1 6762517. Website: www.hpra.ie; e-mail: medsafety@hpra.ie

4.9 Overdose

No cases of acute overdosage appear to have been reported, but even extremely high doses are unlikely to cause harm to patients. No special procedures or antidote are likely to be needed.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

ATC Code: B03B B
After conversion into co-enzyme forms it is concerned in single carbon unit transfers in the synthesis of purines, pyrimidines and methionine.

5.2 Pharmacokinetic properties

About 70 – 80 % of a 2 mg oral solution of folic acid is absorbed. Larger doses are probably equally well absorbed. It is distributed into plasma and extracellular fluid. In plasma, folate is bound weakly to albumin (70 %). There is a further high affinity binder for folate but this has a very low capacity and is barely detectable in normal sera. About 70 % of small doses of folate (about 1 mg) are retained and the rest excreted into the urine. With larger doses most is excreted into the urine. With a 5 mg dose of folate, urinary excretion will be complete in about five hours. There is an enterohepatic circulation of folate. The retained folate is taken into cells and reduced by dihydrofolate to tetrahydrofolate. Folic acid is a relatively poor substrate for folate reduction, the normal substrate being dihydrofolate.

Folic acid itself does not occur in natural materials, it is entirely a pharmacological form of the compound. Once reduced, folate has additional glutamic acid residues added, a folate pentaglutamate being the dominant intracellular analogue. These polyglutamates are the active co-enzymes.

5.3 Preclinical safety data

Folic Acid is a drug on which extensive clinical experience has been obtained. Relevant information for the prescriber is provided elsewhere in the Summary of Product Characteristics.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Mannitol (E421)
Glycerol (E422)
Methyl hydroxybenzoate (E218)
Ethyl hydroxybenzoate (E214)
Propyl hydroxybenzoate (E216)
Sodium dihydrogen phosphate dihydrate
Disodium hydrogen phosphate dodecahydrate
Disodium edetate
Strawberry flavour (contains phenylalanine, cherry juice concentrate and maltol)
Purified water

6.2 Incompatibilities

None stated

6.3 Shelf life

Unopened: 3 years
After first opening: Three months

6.4 Special precautions for storage

Store in a refrigerator (2°C - 8°C)
Store in the original bottle and outer cardboard carton in order to protect from light.

6.5 Nature and contents of container

150 ml amber soda glass (type III) bottle fitted with a 28 mm white child resistant tamper evident screw cap, with expanded polyethylene (EPE) liner, and outer cardboard carton.

6.6 Special precautions for disposal

Not applicable

7 MARKETING AUTHORISATION HOLDER

Pinewood Laboratories Ltd,
Ballymacarbry
Clonmel
Co. Tipperary
Ireland

8 MARKETING AUTHORISATION NUMBER

PA0281/232/001

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 28th May 2010
Date of last renewal: 29th November 2014

10 DATE OF REVISION OF THE TEXT

December 2020