Summary of Product Characteristics

1. NAME OF THE MEDICINAL PRODUCT

Proprietary name: FORTIWIN-4 Injection

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each vial contains Procaine penicillin B.P. 3,000,000 I.U. and Benzylpenicillin sodium B.P. 1,000,000 I.U.

For the full list of excipients, see Section 6.1.

3. PHARMACEUTICAL FORM

Powder for injection.

White or almost white powder.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

It has the same indications as penicillin. As its peak blood concentration is relatively low, it is only indicated in mild infections caused by penicillin-sensitive bacteria, such as tonsillitis, scarlet fever, crysipelas, furuncles and carbuncles. It is also effective for syphilis, Vincent's angina and gonorrhea.

4.2 Posology and method of administration

It is given by i.m. injection only. A suitable amount of water for injection is added into the vial before use. 400,000 i.u. ~ 800,000 i.u. each time, once or twice a day.

4.3 Contraindications

A previous hypersensitivity reaction to any penicillin or to procaine is a contraindication.

Do not inject into or near an artery or nerve.

4.4 Special warnings and precautions for use

Before administration skin tests of procaine and penicillin should be made. It should not be administrated to patients hypersensitive to penicillin and procaine.

The suspension prepared by adding a suitable amount of water for injection into the vial should be stored below 10°C and use up within 24 hours.

Whenever allergic reactions occur, penicillin should be withdrawn unless, in the opinion of the physician, the condition being treated is life-threatening and amenable only to penicillin therapy.

Do not inject intravenously or admix with other intravenous solutions.

Inadvertent intravascular administration, including inadvertent direct intra-arterial injection or injection immediately adjacent to arteries, has resulted in severe neurovascular damage, including transverse myelitis with permanent paralysis, gangrene requiring amputation of digits and more proximal portions of extremities, and necrosis and sloughing at and surrounding the injection site.

Severe effects and complications following accidental intravascular administration have most often occurred in infants and small children. Prompt consultation with an appropriate specialist is indicated if any evidence of compromise of the blood supply occurs at, proximal to, or distal to the site of injection.

Injection into or near a nerve may result in permanent neurological damage. Quadriceps femoris fibrosis and atrophy have been reported following repeated intramuscular injections of penicillin preparations into the anterolateral thigh.
Prolonged use of antibiotics may promote the overgrowth of non-susceptible organisms, including fungi. If superinfection occurs, appropriate measures should be taken.

4.5 Interaction with other medicinal products and other forms of interaction
Tetracycline, a bacteriostatic antibiotic, may antagonize the bactericidal effect of penicillin, and concurrent use of these drugs should be avoided.
Concurrent administration of penicillin and probenecid increases and prolongs serum penicillin levels by decreasing the apparent volume of distribution and slowing the rate of excretion by competitively inhibiting renal tubular secretion of penicillin.

4.6 Pregnancy and lactation
Use in pregnancy
Procaine penicillin has been assigned to pregnancy category B by the FDA. Animal studies failed to reveal evidence of fetotoxicity or teratogenicity. Adverse effects have not been reported during human use; however, there are no controlled data in human pregnancies. Procaine penicillin is only recommended for use during pregnancy when benefit outweighs risk.
Use in lactation
Penicillin G is excreted into breast milk in low concentrations. Although no adverse effects were reported, three potential problems exist for the nursing infant: modification of bowel flora, direct effects on the infant (e.g., allergic response), and interference with the interpretation of culture results if a fever workup is required. It is recommended that caution be used when administering penicillin to nursing women.

4.7 Effects on ability to drive and use machines
None.

4.8 Undesirable effects
There are three types of adverse reaction to procaine penicillin: severe allergic (anaphylaxis); faint (vaso-vagal); and non-allergic (pseudoanaphylactic). Similarities between these reactions can make diagnosis difficult. The clinical imperative is to exclude the life threatening anaphylactic reaction. A person who collapses from shock (low blood pressure and rapid weak pulse) or respiratory failure (from bronchospasm causing wheeze or angioedema causing respiratory obstruction) following an injection of procaine penicillin should be treated for anaphylaxis. These severe allergic reactions are rare.

4.9 Overdose
If overdose is suspected, contact the local poison control center or emergency room immediately. Symptoms of overdose may include: seizures, confusion, mental/mood changes (e.g., agitation).

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

This preparation is available in the form of a sterile dry powder containing benzylpenicillin sodium (or potassium) and procaine penicillin with suitable amount of suspending and buffering agents. The advantage of such a preparation is that it can exert both the prompt action due to the high initial blood levels produced by the soluble sodium salt, and the prolonged action of the insoluble procaine penicillin salt which is absorbed and excreted slowly. Therefore, a single dose injection of this preparation can maintain an effective concentration in blood for 12-24 hours.

5.2 Pharmacokinetic properties

Penicillin G procaine is an equimolecular compound of procaine and penicillin G, administered intramuscularly as a suspension. It dissolves slowly at the site of injection, giving a plateau type of blood level at about 4 hours which falls slowly over a period of the next 15 to 20 hours.

Approximately 60% of penicillin G is bound to serum protein. The drug is distributed throughout the body tissues in widely varying amounts. Highest levels are found in the kidneys with lesser amounts in the liver, skin, and intestines. Penicillin G penetrates into all other tissues to a lesser degree with a very small level found in the cerebrospinal fluid. With normal kidney function, the drug is excreted rapidly by tubular excretion. In neonates and young infants and in individuals with impaired kidney functions, excretion is considerably delayed. Approximately 60 to 90 percent of a dose of parenteral penicillin G is excreted in the urine within 24 to 36 hours.

5.3 Pre-clinical Safety Data

No further information of relevance.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

None.

6.2 Incompatibilities

It may be incompatible with other drugs, including a number of other antibacterials (e.g. tetracyclines, chloramphenicol, erythromycin, lincomycin). And it may be incompatible with metal ions and some rubber products. Its stability may be affected by ionic and nonionic surfactants, oxidising and reducing agents, alcohols, glycerol, glycols, macrogols and other hydroxy compounds, some paraffins and bases, some preservatives for example chlorocresol or thiomersal, carbohydrate solutions in an alkaline pH, fat emulsions, blood and blood products, and viscosity modifiers.

6.3 Shelf life

36 months

6.4 Special precautions for storage

Do not store above 30℃.

Store in the original package.

Keep out of reach of children.

6.5 Nature and contents of container

Clear glass vials supplied in boxes of 50 vials with instructions for use.

6.6 Special precautions for disposal and other handling of the product

Any residual solution should be discarded.

7. MARKETING AUTHORISATION HOLDER AND MANUFACTURING SITE ADDRESSES

Farmasino Co., Ltd

Building 5, No.9 Weidi Road, Nanjing,China

Manufacturer: Reyoung pharmceutical Co., Ltd.

Manufacturing site physical address: No.1 Ruiyang Road, Yiyuan County, Shandong Province, China

8. MARKETING AUTHORIZATION NUMBER

NA

9. DATE OF FIRST REGISTRATION

NA