

1.3.1 Summary of Product Characteristics (SmPC)

1. Name of the medicinal product

Artemether injection

2. Qualitative and quantitative composition

Each one ml contains 80mg artemether.

For the full list of excipients, see section 6.1.

3. Pharmaceutical form

Oil solution for injection

4. Clinical particulars

4.1 Therapeutic indications

Treatment of severe and complicated malaria caused by *P.falciparum* both in adults and children in areas where there is multidrug resistance.

Treatment of uncomplicated malaria in situations where there is widespread prevalence of multi-drug resistant *P.falciparum* infection.

4.2 Posology and method of administration

When used as monotherapy, a minimum 6-day course is required to prevent recrudescence. If regimens of less than 6 days are employed, combination with oral Lumefantrine or mefloquine or another effective blood schizontocid should be employed. Artemether injection is for intramuscular use only. The daily dose can be given as single injection. Severe malaria and complicated malaria including cerebral malaria.

Adults

1 ampoule (80mg) twice on the first day then followed by 1 ampoule (80mg) daily for the subsequent 5 days.

Children

1.6mg/kg body weight twice on the first day then followed by 1.6mg/kg body weight daily for the subsequent 5 days. In children the use of tuberculin syringe is advisable since the injection volume will be small. 3.2mg/kg by the intramuscular route as a loading dose on the first day, followed by 1.6mg/kg daily for a minimum of 3 days or until the patient can take oral therapy to complete a 7-day course. The daily dose can be given as a single injection. In children, the use of tuberculin syringe is advisable since the injection volume will be small.

4.3 Contraindications

Artemether is contraindicated in patients with hypersensitivity to artemether or other artemisinin compounds. Artemether is not recommended in the first trimester of pregnancy because of limited data.

4.4 Special warnings and precautions for use

Do not exceed the prescribed dose. In case of overdosage, urgent symptomatic treatment in a specialized unit is required.

Caution is required in patients with cardiovascular disease, hepatic impairment, renal insufficiency.

Useage in pregnancy

As per information available from World Health Organization, little experience has been gained with the use of this drug in pregnancy but it should not be withheld if it is considered life-saving to the mother. Artemisinin and its derivatives can be used for treatment of uncomplicated malaria during the second and third trimester of pregnancy in areas of multidrug resistance. Owing to lack of data, use in the first trimester of pregnancy is not recommended. Artemisinin and its derivatives have not been measured in the milk of nursing mothers. It is very likely that these are present in milk and nursing mothers should not be given artemisinin if they suffering from uncomplicated malaria either in multidrug resistance or drug sensitive situations. If the nursing mothers is suffering from complicated and serious malaria induced by multidrug-resistant *P.falciparum* and artemisinin is indicated, breast feeding should be stopped.

4.5 Interaction with other medicinal products and other forms of interaction

Since electrocardiographic QT prolongation has been reported in some patients treated with artemether, it is recommended to avoid prescription of medications known to produce a prolongation of QT interval or patients receiving such medications: erythromycin, terfenadine, astemizole, probucol, Class Ia anti-arrhythmic agents (quinidine, procainamide, disopyramide). Class III anti-arrhythmic agents (amiodarone, bretylium), bepridil, sotalol, tricyclic antidepressants, some neuroleptics and phenothiazines are to be monitored closely.

4.6 Fertility, pregnancy and lactation

Useage in pregnancy

As per information available from World Health Organization, little experience has been gained with the use of this drug in pregnancy but it should not be withheld if it is considered life-saving to the mother. Artemisinin and its derivatives can be used for treatment of uncomplicated malaria during the second and third trimester of pregnancy in areas of multidrug resistance. Owing to lack

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4.7 Effects on ability to drive and use machines

Not relevant.

4.8 Undesirable effects

Artemether has been remarkably well-tolerated, and appears less toxic than quinine or chloroquine; adverse effects include bradycardia, electrocardiogram abnormalities, dizziness, injection site pain, skin reactions, and fever. Transient decreases in neutrophils and reticulocytes have been reported in some patients with artemether. Drug induced fever has been observed with artemether. Mild reactions were seen in patients to whom artemether had been administered intramuscularly. These include nausea, hypotension, dizziness and tinnitus. These side effects were also reported: dark urine, sweating, somnolence, and jaundice. There were no deaths or any other side effects. No irreversible side effects have not been observed in clinical use but clinical trials suggest that coma may be prolonged in patients treated with artemether and there was an increased incidence of convulsions in one trial in cerebral malaria. Transient first degree heart block has been documented in three patients receiving artemether. Neurotoxicity has been observed in animal studies but not in humans. Cardioxicity has been observed following administration of high doses of artemether.

4.9 Overdose

There is no experience in overdosage with artemether. There is no specific antidote known for artemisinin derivatives.

5. Pharmacological properties

5.1 Pharmacodynamic properties

Artemether is active against all plasmodia including those which may be resistant to other antimalarials. Artemether has very rapid schizontocidal activity. The schizontocidal activity of artemether is mainly due to destruction of the asexual erythrocytic forms of *P. falciparum* and *P. vivax*. There is inhibition of protein synthesis during growth of trophozoites. There is no cross

resistance with chloroquine. It is not hypnozoitocidal but it reduces gametocyte carriage. There is no rationale at present for using artemether for chemoprophylaxis

5.2 Pharmacokinetic properties

The drug is absorbed rapidly and completely after i.m. injection. The maximum blood concentration of the drug is observed in about 7 hours after i.m injection of 10mg/kg in human body. The peak value is about 0.8 μ g/ml with the plasma half-life of about 13 hours. It is widely distributed in the body with the highest level found in the brain and followed by liver and kidney. It is mainly excreted in the feces with part in urine.

5.3 Preclinical safety data

In animal studies, cleft palate was observed in rats, mice, hamsters, rabbits, dogs and primates; not in horses and sheep. In some cases these divergences were combined with defects of the central nervous system and of the heart. In primates, effects in the brain were seen after exposure. Moreover, intra-uterine growth can be delayed. All these effects were seen at high dosages.

6. Pharmaceutical particulars

6.1 List of excipients

Soybean oil.

6.2 Incompatibilities

None known.

6.3 Shelf life

3 years

6.4 Special precautions for storage

As packaged for sale

6.5 Nature and contents of container

Ampoules made of low borosilicate glass.