Summary of Product Characteristic

Sanacore

1. Name of the Medicinal Product

Sanacore

2. Quality and Quantitative Composition

Each mL contains:- Adenosine 3 mg

3. Pharmaceutical Form

Solution for injection

Clear, colorless sterile solution for injection

4. Clinical Particulars

4.1 Therapeutic indication

Adults

Rapid conversion to a normal sinus rhythm of paroxysmal supraventricular tachycardias, including those associated with accessory by-pass tracts (Wolff-Parkinson-White Syndrome).

Diagnostic Indications

Aid to diagnosis of broad or narrow complex supraventricular tachycardias. Although Sanacore will not convert atrial flutter, atrial fibrillation or ventricular tachycardia to sinus rhythm, the slowing of AV conduction helps diagnosis of atrial activity.

Sensitization of intra-cavitary electrophysiological investigations.

4.2 Posology and method of administration

General

Sanacore is intended for hospital use only with monitoring and cardiorespiratory resuscitation equipment available for immediate use. It should be administered by rapid IV bolus injection according to the ascending dosage schedule below. To be certain the solution reaches the systemic circulation administer either directly into a vein or into an IV line. If given into an IV line it should be injected as proximally as possible, and followed by a rapid saline flush.

Sanacore should only be used when facilities exist for cardiac monitoring. Patients who develop high-level AV block at a particular dose should not be given further dosage increments.

Therapeutic dose

Adult

Initial dose: 3 mg given as a rapid intravenous bolus (over 2 seconds).

Second dose: If the first dose does not result in elimination of the supraventricular tachycardia within 1 to 2 minutes, 6 mg should be given also as a rapid intravenous bolus.

Third dose: If the second dose does not result in elimination of the supraventricular tachycardia within 1 to 2 minutes. 12 mg should be given also as a rapid intravenous bolus.

Additional or higher doses are not recommended.

Children

No controlled paediatric studies have been performed. The level of evidence does not allow a recommended posology.

The safety and efficacy of adenosine in children aged 0 to 18 years have not been established.

Elderly

See dosage recommendations for adults.

Diagnostic dose

The above ascending dosage schedule should be employed until sufficient diagnostic information has been obtained.

Method of administration:

Rapid intravenous injection only.

4.3 Contraindications

Sanacore is contraindicated for patients suffering from:

- Second or third degree AV block (except in patients with a functioning artificial pacemaker)
- Sick sinus syndrome (except in patients with a functional artificial pacemaker).
- Chronic obstructive lung disease with evidence of bronchospasm (such as asthma)
- Known hypersensitivity to adenosine
- Long QT syndrome
- Severe hypotension; decompensated states of heart failure

4.4 Special warnings and precautions for use

Special warnings:

Because it has the potential to cause significant hypotension, adenosine should be used with caution in patients with left main coronary stenosis, uncorrected hypovolemia, stenotic valvular heart disease, left to right shunt, pericarditis or pericardial effusion, autonomic dysfunction or stenotic carotid artery disease with cerebrovascular insufficiency.

Adenosine should be used with caution in patients with recent myocardial infarction, heart failure, or in patients with minor conduction defects (first degree AV block, bundle branch block) that could be transiently aggravated during infusion.

Some cases of severe bradycardia have been reported. Some occurred in early post heart transplant patients; in the other cases, occult sino-atrial disease was present. The occurrence of severe bradycardia should be taken as a warning of underlying disease and could potentially favor the occurrence of torsades de pointes. In patients with recent heart transplantation (less than 1 year) an increased sensitivity of the heart to adenosine has been observed.

Due to the possibility of transient cardiac arrhythmias arising during conversion of the supraventricular tachycardia to normal sinus rhythm, administration should be carried out in hospital with electrocardiographic monitoring.

Since neither the kidney nor the liver are involved in the degradation of exogenous adenosine, Adenosine’s efficacy should be unaffected by hepatic or renal insufficiency.

As dipyridamole is a known inhibitor of adenosine uptake, it may potentiate the action of Sanacore. It is therefore suggested that Sanacore should not be administered to patients receiving dipyridamole; if use of Sanacore is essential, dipyramidole should be discontinued 24 hours beforehand or the dosage of Sanacore should be reduced.

Precaution:

Sanacore is intended for use by physicians familiar with the product in a hospital setting with monitoring and cardio-respiratory resuscitation equipment available for immediate use if necessary.

The occurrence of angina, severe bradycardia, severe hypotension, respiratory failure (potentially fatal), or asystole/cardiac arrest (potentially fatal), should lead to immediate discontinuation of administration.

In patients with history of convulsions/seizures, the administration of adenosine should be carefully monitored.

Patients with atrial fibrillation/flutter and an accessory by-pass tract may develop increased conduction down the anomalous pathway.

Because of the possible risk of torsades de pointes, Sanacore should be used with caution in patients with a prolonged QT interval, whether this is congenital, drug induced or of metabolic origin.

In patients with chronic obstructive pulmonary disease, adenosine may precipitate or aggravate bronchospasm.

4.5 Interaction with other medicinal products and other forms of interactions

As dipyridamole is a known inhibitor of adenosine uptake, it may potentiate the action of Sanacore; in one study dipyridamole was shown to produce a 4 fold increase in adenosine actions. Asystole has been reported following concomitant administration. It is therefore suggested that Sanacore should not be administered to patients receiving dipyridamole; if use of Sanacore is essential, dipyramidole should be discontinued 24 hours beforehand or 4-fold of the dosage of Sanacore should be reduced. (e.g. initial dose: 0.5 to 1.0 mg)

Aminophylline, theophylline and other xanthines are competitive adenosine antagonists and should be avoided for 24 hours prior to use of adenosine.

Food and drinks containing xanthines (tea, coffee, chocolate and cola) should be avoided for at least 12 hours prior to use of adenosine.

Sanacore may interact with drugs tending to impair cardiac conduction.

4.6 Fertility, pregnancy and lactation

Pregnancy: In the absence of evidence that adenosine does not cause foetal harm, Sanacore should not be used during pregnancy unless the physician considers the benefits to outweigh the potential risks.

Lactation: Studies have not been performed in lactating animals or women. Therefore, adenosine should not be used during lactation.

4.7 Effects on ability to drive and use machine

Not applicable.

4.8 Undesirable effects

Frequencies provided refer to legacy data. For newly included safety items, which are based exclusively on post-marketing experience, the frequency listed is; "Not known"

The following CIOMS frequency rating is used, where applicable:

Very common: ≥ 10%; Common: ≥ 1% and < 10%; Uncommon: ≥ 0.1% and < 1%; Rare: ≥ 0.01% and < 0.1%; Very rare: < 0.01%.

These side effects are generally mild, of short duration (usually less than 1 minute) and well tolerated by the patient. However severe reactions can occur.

• Cardiac disorders

Very common:

- Bradycardia
- Sinus pause
- Skipped beats
- Atrioventricular block
- Atrial extrasystoles
- Ventricular excitability disorders such as ventricular extrasystoles, non –sustained ventricular tachycardia

Uncommon:

- Sinus tachycardia
- Palpitations

Very rare:

- Severe bradycardia which is not corrected by atropine and may require temporary pacing
- Atrial fibrillation
- Ventricular excitability including ventricular fibrillation

Not known:

- Asystole/Cardiac arrest, sometimes fatal especially in patients with underlying ischemic heart disease/cardiac disorder
- MI/ST segment elevation especially in patients with pre-existing severe CAD

Adenosine induced bradycardia predisposes to ventricular excitability disorders, including ventricular fibrillation and torsade de pointes, which justify the recommendations made in Section "Posology and Method of Administration". The above mentions cardiac arrhythmias occur at the time of conversion to normal sinus rhythm.

• Nervous system disorders

Common:

- Headache
- Dizziness / light-headedness

Uncommon:

- Head pressure

Very rare:

- Transient and spontaneously and rapidly reversible worsening of intracranial hypertension

Not known:

- Loss of consciousness / syncope
- Convulsions, especially in predisposed patients

• **Eye disorders**

Uncommon:

- Blurred vision

• **Respiratory, thoracic and mediastinal disorders**

Very common:

- Dyspnea (or the urge to take a deep breath)

Uncommon:

- Hyperventilation

Very rare:

- Bronchospasm

Not known:

- Respiratory failure - Apnea / Respiratory arrest

Cases with fatal outcome of respiratory failure, of bronchospasm, and of apnea / respiratory arrest have been reported

• **Gastro-intestinal system disorders**

Common:

- Nausea

Uncommon:

- Metallic taste

Not known:

- Vomiting

• **Vascular disorders**

Very common:

- Flushing

Not known

- Hypotension sometimes severe
- Cerebrovascular accident/transient ischemic attack; secondary to the hemodynamic effects of adenosine including hypotension

• **General disorders and Administration Site conditions**

Very common:

- Chest pressure/pain, feeling of thoracic constriction/oppression

Common:

- Burning sensation

Uncommon:

- Heaviness in arms - Arm, neck and back pain
- Feeling of general discomfort/weakness/pain

Very rare:

- Injection site reactions

• Psychiatric disorders

Common:

- Apprehension

• Immune system disorders

Not known:

- Anaphylactic reaction (including angioedema and skin reactions such as urticarial and rash)

4.9 Overdose

As the half life of adenosine in blood is very short, the duration of any effects is expected to be limited. Pharmacokinetic evaluation indicates that methyl xanthines are competitive antagonists to adenosine, and that therapeutic concentrations of theophylline block its exogenous effects.

5. Pharmacological Properties

Therapeutic or Pharmacological Class

ATC Code: Other Cardiac Preparations C01EB10

Endogenous nucleoside with peripheral vasodilator/antiarrhythmic effect

5.1 Pharmacodynamic Properties

Antiarrhythmic drug

Adenosine is a purine nucleoside which is present in all cells of the body. Animal pharmacology studies have in several species shown that adenosine has a negative dromotropic effect on the atrioventricular (AV) node.

In man Sanacore (adenosine) administered by rapid intravenous injection slows conduction through the AV node. This action can interrupt re-entry circuits involving the AV node and restore normal sinus rhythm in patients with paroxysmal supraventricular tachycardias. Once the circuit has been interrupted, the tachycardia stops and normal sinus rhythm is re-established.

One acute interruption of the circuit is usually sufficient to arrest the tachycardia.

Since atrial fibrillation and atrial flutter do not involve the AV node as part of a re-entry circuit, adenosine will not terminate these arrhythmias.

By transiently slowing AV conduction, atrial activity is easier to evaluate form ECG recordings and therefore the use of adenosine can aid the diagnosis of broad or narrow complex tachycardias.

Adenosine may be useful during electrophysiological studies to determine the site of AV block or to determine in some cases of pre-excitation, whether conduction is occurring by an accessory pathway or via the AV node.

5.2 Pharmacokinetics Properties

Adenosine is impossible to study via classical ADME protocols. It is present in various forms in all cells of the body where it plays an important role in energy production and utilization systems. An efficient salvage and recycling system exists in the body, primarily in the erythrocytes and blood vessel endothelial cells. The half life *in vitro* is estimated to be < 10 seconds. The *in vivo* half life may be even shorter.

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 Summary of Product Characteristics (SPC).

6. Pharmaceutical Particulars

6.1 List of excipients

Sodium Chloride, Sodium Hydroxide, Hydrochloric acid, Water for Injections

6.2 Incompatibilities

Compatibility with other medicines is not known.

6.3 Shelf life

2 years

6.4 Special precautions for storage

Store below 30°C. Do not refrigerate.

6.5 Nature and contents of container

Clear glass vial (type I) closed with aluminium flip-off caps and Clear glass ampoule (type I) and packed with or without a paper box of 1, 2, 5, 6, 10, 12 and 20 vials/ ampoules

6.6 Special precautions for disposal and other handling

Any portion of the container, not used, should be discarded.

7. Marketing Authorization Holder

ABLE MEDICAL COMPANY LIMITED
111 Moo. 9 Nong Son, Chiang Yuen,
Mahasarakham 44160, Thailand

8. Marketing Authorization Numbers

1A 15093/67 (NG)

9. Date of authorization

27 December 2024

10. Date of revision of the text

27 December 2024