Acetylsalicylic Acid (ASA) for Suspected Acute Myocardial Infarction

revised October 2008

Preamble

Acute myocardial infarction is a common, life-threatening disorder caused by occlusion of coronary blood supply. The extent of heart muscle damage is determined by the size of heart muscle affected by a lack of blood supply and the duration that blood flow to the heart muscle is interrupted.

A cause of interrupted coronary blood flow is formation of a blood clot (thrombus) in the coronary artery. Acetylsalicylic acid (ASA) prevents the formation of a substance (thromboxane A_2) which causes platelets to aggregate and arteries to constrict. Studies have demonstrated that ASA reduces mortality associated with acute myocardial infarction. The earlier the patient receives ASA after symptom onset, the greater the potential benefit.

Requirements

1. Fully licensed Technician or Technician-Paramedic.

2. Certification in acetylsalicylic acid (ASA) protocol by the Medical Director.

Indications

1. Patient with chest pain suggestive of acute myocardial infarction.

2. Patient with previous cardiac history presenting with chest pain consistent with cardiac ischemia, unrelieved by nitroglycerine.

Contraindications

1. Known hypersensitivity to acetylsalicylic acid (ASA).
2. Evidence of active gastrointestinal bleeding (e.g hematemesis, melena, hematochezia).

Drug Dose and Frequency

acetylsalicylic acid: 160 mg orally
160 mg po as a single, one-time dose

Procedure

1. Perform patient assessment and record vital signs.
2. Assess that patient meets criteria for this protocol.
3. Ensure there are no contraindications to use of this protocol.
4. Patient should be placed in semi-Fowler's position, or position of comfort, with high concentration oxygen via non-rebreathe mask.
5. Initiate cardiac monitoring, if available.
6. Have the patient chew ASA dose.
7. Initiate transport, unless other emergency condition required immediate treatment.
8. Monitor and reassess patient en route.
9. Notify receiving facility of patient's condition and medication used.

Documentation Requirements

The following information must be documented on the patient care report form:

1. Patient's presenting signs and symptoms, including vital signs.
2. Indications for protocol use.
3. Dose, time, and effect of acetylsalicylic acid used.

4. Repeat assessment and vital signs, as indicated.

5. Changes from baseline, if any, that occur during treatment or transport.

6. Signature and license number of EMS personnel performing any transfer of function skills.

Certification Requirements

1. Attend in-depth classes and lectures on acute coronary syndromes, including acute myocardial infarction.

2. Understand the pathophysiology of acute coronary syndromes, including acute myocardial infarction.

3. Demonstrate an understanding of the pharmacology and mechanism of action of acetylsalicylic acid.

4. Pass a written examination.

5. Certification is by the Medical Director.

Recertification Requirements

1. Review class and recertification is done every 12 months.

2. A record will be kept to document all cases where this protocol is used.

Decertification

1. Decertification is at the discretion of the Medical Director or the Provincial Medical Director, Emergency Medical Services, Manitoba Health & Healthy Living.

Quality Assurance Requirements

1. Appropriate quality assurance policies must be in place. The Medical Director or designate must review all instances where this protocol is used. As a minimum, the following must be assessed:
    i) appropriateness of implementation
    ii) adherence to protocol
    iii) any deviation from the protocol
    iv) corrective measures taken, if indicated

2. Yearly statistics for protocol use compiled and forwarded to Emergency Medical Services, Manitoba Health & Healthy Living.