NON-ST ELEVATION ACUTE CORONARY SYNDROME: OUTPATIENT ANTITHROMBOTIC MANAGEMENT

OBJECTIVE:
To review the use of antiplatelet agents and oral anticoagulants for the secondary prevention of ischemic cardiac disease in patients presenting with non-ST elevation acute coronary syndrome.

BACKGROUND:
New approaches to antithrombotic therapy have become available to treat patients with non-ST elevation acute coronary syndrome (NSTE-ACS). This document summarizes treatment options according to the method of revascularization (percutaneous coronary intervention [PCI] versus coronary artery bypass graft [CABG] versus medical therapy).

MECHANISM OF ACTION OF PLATELET INHIBITORS:
Acetylsalicylic acid (ASA) is an antiplatelet agent acting via the inhibition of thromboxane production. Clopidogrel (Plavix®), prasugrel (Effient®) and ticagrelor (Brilinta®) act by blocking platelet adenosine diphosphate (ADP) receptors of subtype P2Y12.

INDICATIONS FOR ANTITHROMBOTIC THERAPY IN NSTE-ACS:
See treatment algorithm below for details. The initial decisions should be based on whether the patient was treated with PCI, CABG or with medical therapy only.
AGENTS AND DOSING:

- **ASA**: 81 mg daily in all patients unless allergic or intolerant, in which case it should be replaced by clopidogrel.
- **Clopidogrel**: 75 mg daily. A maintenance dose of 150 mg daily can be considered for the first 6 days in patients treated with PCI.
- **Prasugrel**: 10 mg daily. Post-hoc analyses of a clinical trial suggest that patients ≥75 years of age or with a body weight <60 kg derived no net benefit from prasugrel; the manufacturer suggests using a dose of 5 mg/day in these patients but this is based on PK/PD modeling rather than clinical trial data. Prasugrel is currently not recommended for patients with prior stroke or transient ischemic attack (TIA).
- **Ticagrelor**: 90 mg twice daily.

MONITORING:

No laboratory monitoring is required for patients taking aspirin, clopidogrel, prasugrel, or ticagrelor.
**Duration of Dual Antiplatelet Therapy After Coronary Artery Stents:**

Ideally dual antiplatelet therapy is continued for 1 year. However in situations in which shorter durations of dual antiplatelet therapy are required (urgent surgery, need for concomitant anticoagulation), a minimum of 4-6 weeks for bare metal stents and a minimum of 3-6 months for drug eluting stents may be acceptable – such patients should be managed on a case by case basis.

**Peri-procedural Management:**

**Non-CABG Procedure**

The use of antiplatelet agents is known to increase the risk of bleeding and transfusion requirements associated with surgery and other invasive procedures. However, early discontinuation of dual antiplatelet therapy (within 3-6 months for a drug eluting stent or within 6 weeks of bare-metal stent implantation) is associated with an increased risk of major adverse cardiovascular events and stent thrombosis. For this reason, procedures associated with significant bleeding risk should be delayed beyond these time frames, if possible, and, if not possible, done with the patient remaining on therapy. If prasugrel can be stopped safely, it should be discontinued at least 7 days prior to surgery. For ticagrelor and clopidogrel, stopping 5 days prior to a procedure is sufficient.

**CABG**

In stable patients with ACS without critical coronary anatomy who are clinically stabilized, clopidogrel and ticagrelor should be stopped for 5 days before CABG and prasugrel should be withheld for 7 days. In patients with ACS, dual antiplatelet therapy should be restarted at maintenance doses within 48-72 hours post-operatively when deemed safe by the cardiac surgical team.

**Special Considerations:**

- The P2Y12 receptor inhibitors (clopidogrel, prasugrel or ticagrelor) initially selected at hospital discharge should not be switched to another P2Y12 inhibitor unless there is a compelling clinical reason to do so such as intolerance.

- The P2Y12 receptor inhibitors (clopidogrel, prasugrel or ticagrelor) in conjunction with aspirin are generally continued for 12 months following ACS plus/minus stent placement. After 12 months, the P2Y12 inhibitor can be safely discontinued (although aspirin should be continued indefinitely). Consultation with a specialist is suggested before continuing the P2Y12 receptor inhibitors for greater than one year.

- The combination of oral anticoagulation and antiplatelet therapy significantly increases the risk of bleeding. Careful decisions, and possible consultation with a specialist, are suggested in patients with an indication for both an anticoagulant and antiplatelet therapy.
OTHER RELEVANT THROMBOSIS CANADA CLINICAL GUIDES:

- Acetyl Salicylic Acid (ASA)
- Clopidogrel (Plavix®)
- Prasugrel (Effient®)
- Ticagrelor (Brilinta®)

REFERENCES:


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Please note that the information contained herein is not to be interpreted as an alternative to medical advice from your doctor or other professional healthcare provider. If you have any specific questions about any medical matter, you should consult your doctor or other professional healthcare providers, and as such you should never delay seeking medical advice, disregard medical advice or discontinue medical treatment because of the information contained herein.