**Prescribing Protocol SESLHDPR/575**  
**Ticagrelor in Acute Coronary Syndromes**

<table>
<thead>
<tr>
<th>Areas where applicable</th>
<th>Emergency and Cardiology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Areas where not applicable</td>
<td>Other clinical services</td>
</tr>
<tr>
<td>Authorised Prescribers</td>
<td>Medical staff in Emergency and Cardiology departments</td>
</tr>
<tr>
<td>Indication for use</td>
<td>Patients presenting with acute coronary syndrome (Unstable Angina, Non-ST elevation myocardial infarction, ST elevation myocardial infarction)</td>
</tr>
</tbody>
</table>
| Clinical condition | Patients presenting with 2 out of 3 of  
1. Chest pain  
2. Dynamic ECG changes consistent with ischaemia  
3. Evidence of myocardial ischaemia on cardiac enzymes; i.e. a rise and/or fall in troponin levels |
| Contra-indications | • Active bleeding  
• History of intracranial bleed  
• Hypersensitivity to ticagrelor or any of the excipients  
• Moderate to severe hepatic impairment.  
• Co-administration of ticagrelor with strong CYP3A4 inhibitors |
| Precautions | • Significant cardiac conduction disease  
• Patients with concomitant administration of drugs that may increase the risk of bleeding  
• Asthma/ chronic obstructive pulmonary disorder  
• Weight < 60 kg  
• Hyperuricaemia |
| Place in Therapy | In conjunction with aspirin as part of STEMI/ACS pathway protocol at the discretion of treating cardiologist. |
| Part of combination therapy, other drugs: | Aspirin and IV heparin bolus |
| Dosage | Initiate therapy with a single 180 mg loading dose (two tablets of 90 mg) and then continue at 90 mg twice daily. |
| Duration of therapy | For duration of inpatient admission, and following discharge for up to 12 months. |
| Important Drug Interactions | Ticagrelor is a cytochrome P450 3A4 substrate and mild inhibitor of CYP3A4.  
Strong CYP3A4 inhibitors are contraindicated and include ketoconazole, clarithromycin, nefazadone, ritonavir and atazanavir.  
Moderate CYP3A4 inhibitors may increase exposure to ticagrelor and include diltiazem, amprenavir, aprepitant, erythromycin, fluconazole and verapamil.  
CYP3A4 inducers reduce efficacy of ticagrelor and include rifampicin, dexamethasone, phenytoin, carbamazepine and phenobarbitone.  
Concentrations of simvastatin, atorvastatin, digoxin and cyclosporin are increased by ticagrelor. Monitor cautiously for toxicity. |
### Administration instructions

For oral use, tablet taken with or without food.

### Monitoring requirements

- **Major bleeding**
- If necessary, monitor concentrations of digoxin and cyclosporin, and monitor for adverse effects of simvastatin or atorvastatin

### Management of complications

Symptomatically managed on a case by case basis and assessment of risk of drug cessation

### Basis of Protocol/Guideline:

- TGA AUSPAR report
- Steg et al. Circulation 2010; 122:2131 -2141
- European Society of Cardiology. Acute Myocardial Infarction in patients presenting with ST-segment elevation (Management of)
- Joint ACC/AHA Guidelines for the Management of Patients with STEMI
- Prescribing Information (TGA) last updated 28/07/2015

### Groups consulted in development of this guideline

Department of Cardiology, Cardiothoracic Surgery, Emergency and Cardiac Anaesthetics at the POWH

---

### AUTHORISATION

**Author (Name)**

- Original Author: Dr Sze-Yuan Michael Ooi
- Reviewed 2015: Dr Mark Sader & Cardiology Clinical Stream
- Reviewed 2018: Dr Mark Sader
- Amended November 2018: Dr Alastair Carlyle

**Position**

Staff Specialist

**Department**

Cardiology

**Department Contact**

Dr Ooi, Level 3 Campus Centre, Prince of Wales Hospital, Barker Street, Randwick 2031
- Phone 9382 0700  szeyuan.ooi@ehc.com.au
- Dr Alastair Carlyle, Cardiology Department, The Sutherland Hospital
- Phone 9540 7111, Alastair.Carlyle@health.nsw.gov.au
- Dr Sader, Cardiology St George Hospital Phone 91133164 Mark.Sader@HEALTH.NSW.GOV.AU

### GOVERNANCE

**Enactment date**

December 2018

**Expiry date:**

December 2021

**Ratification date by SESLHD Drug &QUM Committee**

6th December 2018

**Chair, Drug and Quality Use of Medicines Committee**

Professor George Rubin

**Version Number**

4