Ticagrelor

Classification

Antiplatelet agent

Indications

CCP: Adjunctive antiplatelet therapy for STEMI

Contraindications

- Hypersensitivity to ticagrelor or any component
- Active pathological bleeding (e.g., peptic ulcer, intracranial hemorrhage) or history of intracranial hemorrhage
- Moderate to severe hepatic impairment
- Concurrent use of strong CYP3A4 inhibitors (e.g., ketoconazole, clarithromycin, ritonavir, atazanavir, nefazodone)

Adult dosages

CCP: Adjunctive antiplatelet therapy for STEMI

- 180 mg PO as soon as possible after diagnosis in combination with aspirin

Mechanism Of Action

Reversibly binds ADP P2Y12 receptor on the platelet surface, preventing activation of the GPIIb/IIIa complex, reducing platelet aggregation.

Pharmocokinetics

Following oral administration:

- Onset: within 30 minutes
- Peak: 2 hours
- Duration: 2-8 hours
- Half-life: 7 hours (9 hours for active metabolite)
- Elimination: feces and urine

Adverse Effects

>10%: Respiratory: Dyspnea (14% to 21%)

1% to 10%:

Cardiovascular: ECG abnormality (ventricular pause; 2% to 6%)

Endocrine & metabolic: Gout (≤2%)

Gastrointestinal: Nausea (4%)

Hematologic & oncologic: Major hemorrhage (4%), minor hemorrhage (4%)

Nervous system: Dizziness (5%)

Renal: Increased serum creatinine (7%; transient; mechanism undetermined)

Frequency not defined: Endocrine & metabolic: Increased uric acid

Warning And Precautions

Ticagrelor increases the risk of bleeding including significant and sometimes fatal bleeding. Use is contraindicated in patients with active pathological bleeding (eg, peptic ulcer bleeding, intracranial hemorrhage) or history of intracranial hemorrhage. Additional risk factors for bleeding include propensity to bleed (eg, recent trauma or surgery, recent or recurrent GI bleeding, active peptic ulcer disease (PUD), moderate to severe hepatic impairment), coronary artery bypass graft (CABG) or other surgical procedure, concomitant use of medications that increase risk of bleeding (eg, warfarin, nonsteroidal anti-inflammatory drugs), and advanced age. Bleeding should be suspected if patient becomes hypotensive after undergoing recent coronary angiography, percutaneous coronary intervention, CABG, or other surgical procedure even if overt signs of bleeding do not exist.