Dipyridamole (dye-peer-id-a-mole)  
- Apo-Dipyridamole, Dipridacot, Novodipiradol, Persantine, Persantine IV  

**Classification**  
Therapeutic: antiplatelet agents, diagnostic agents (coronary vasodilators)  
Pharmacologic: platelet adhesion inhibitors  

**Pregnancy Category** B  

**Indications**  
**PO:** Prevention of thromboembolism in patients with prosthetic heart valves (with warfarin). Maintains patency after surgical grafting procedures, including coronary artery bypass (with aspirin). IV: In an alternative to exercise in myocardial perfusion scintigraphy (cardiac stress testing with radiotracer imaging).  

**Action**  
**PO:** Decreases platelet aggregation by inhibiting the enzyme phosphodiesterase.  
**IV:** Produces coronary vasodilation by inhibiting adenosine uptake.  

**Therapeutic Effects:** PO: Inhibition of platelet aggregation and subsequent thromboembolic events. IV: In diagnostic thallium imaging, dipyridamole dilates normal coronary arteries, reducing flow to vessels that are narrowed and causing abnormal thallium distribution.  

**Pharmacokinetics**  
**Absorption:** Moderately absorbed (30–60%) after oral administration.  
**Distribution:** Widely distributed. Crosses the placenta, enter breast milk.  
**Metabolism and Excretion:** Metabolized by the liver; excreted in the bile.  
**Half-life:** 10 hr.  

**TIME/ACTION PROFILE (PO/IV)**  
<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
</tr>
<tr>
<td>IV</td>
<td>unknown</td>
<td>6.5 min†</td>
<td>30 min</td>
<td>from start of infusion</td>
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</table>

**Contraindications/Precautions**  
Contraindicated in: Hypersensitivity.  
Use Cautiously in: Hypotensive patients; Geri: Appears on Beers list; Geriatric patients may be more susceptible to orthostatic hypotension; Patients with platelet defects; Pregnancy (although safety not established, has been used without harm during pregnancy); Children <12 yr (safety not established).  

**Adverse Reactions/Side Effects**  

**Interactions**  
**Drug-Drug:** Additive effects with aspirin on platelet aggregation. Risk of bleeding may be ↑ when used with anticoagulants, thrombolytic agents, NSAIDs, coenzyme Q10, niacinamide, or valproic acid. ↑ risk of hypotension with alcohol. Theophylline may negate the effects of dipyridamole during diagnostic thallium imaging.  

**Route/Dosage**  
**PO (Adults):** 225–400 mg/day in 3–4 divided doses.  
**IV (Adults):** 570 mcg/kg; maximum dose 60 mg.  

**Nursing Implications**  
**Assessment**  
**PO:** Monitor BP and pulse before instituting therapy and regularly during period of dosage adjustment. Geri: Monitor patient for orthostatic hypotension.  
**IV:** Monitor vital signs during and for 10–15 min after infusion. Obtain ECG in at least 1 lead. If severe chest pain or bronchospasm occurs, administer IV nitroglycerin 50–250 mg at a rate of 50–100 mg over 30–60 sec. If hypotension is severe, place patient in a supine position with head tilted down. If chest pain is not relieved with nitroglycerin 250 mg, administer nitroglycerin SL. If chest pain is still unrelieved, treat as myocardial infarction.  
**Lab Test Considerations:** Bleeding time should be monitored periodically throughout therapy.  

**Potential Nursing Diagnoses**  
Decreased cardiac output (Indications)  
Acute pain (Indications)  

**Implementation**  
**PO:** Administer with a full glass of water at least 1 hr before or 2 hr after meals for faster absorption. If GI irritation occurs, may be administered with or immediately after food.  
**IV:** Use tubing or catheter of plastic construction.
after meals. Tablets may be crushed and mixed with food if patient has difficulty swallowing. Pharmacist may make a suspension.

**IV Administration**
- **pH:** 2.2–3.2
- **Intravenous Infusion:** Dilute in at least a 1:2 ratio of 0.45% NaCl, 0.9% NaCl, or D5W for a final volume of 20–50 mL. Undiluted dipyridamole may cause venous irritation. Infuse over 5 min.
- **Y-Site Compatibility:** No information available.

**Patient/Family Teaching**
- **PO:** Instruct patient to take medication at evenly spaced intervals as directed. Take missed doses as soon as remembered unless the next scheduled dose is within 6 hr. Do not double doses. Benefits of medication may not be apparent in patients. Encourage patient to continue taking medication as directed.
- **Caution patient to change positions slowly to minimize orthostatic hypotension.
- **Advises patient to avoid use of alcohol, as it may potentiate the hypotensive effects.** Alcohol products should also be avoided because nicotine causes vasoconstriction.
- **Advise patient to consult health care professional before taking OTC medications concurrently with this medication.** Aspirin should be taken only if directed and only as prescribed. Advise patient to discuss alternatives for pain relief or fever.
- **Advise patient to notify health care professional of unusual bleeding or bruising occurs.** Concurrent use of aspirin or warfarin may increase risk of bleeding but is commonly used with specific indications.
- **Advise patient to notify health care professional of medication regimen and whether using concurrent aspirin or warfarin therapy.
- **IV:** Instruct patient to notify health care professional immediately if dyspnea or chest pain occurs.

**Evaluation/Desired Outcomes**
- Prevention of postoperative thromboembolic complications associated with prosthetic heart valves.
- Maintenance of patency after surgical graft procedures.
- Coronary vasodilation in thallium myocardial perfusion imaging.

Why was this drug prescribed for your patient?