Cardiac Diseases and Therapies
ACUTE CORONARY SYNDROMES
FONDAPARINUX CLINICIAN GUIDE

A GENERAL DOSING GUIDELINES

Note: Unfractionated heparin should be used for patients with creatinine clearance <30 mL/min.

Mechanism of Action: selective inhibitor of Factor Xa.

Dose
- 2.5 mg SC q24h

Note: For indications other than acute coronary syndromes, such as VTE, the full therapeutic anticoagulation dose is 5 mg if weight is <50 kg, 7.5 mg for 50-100 kg, and 10 mg for patients >100 kg.

Duration of Therapy
- 48 hours to 8 days
- average duration of therapy is 5 days

Exclusions
- contraindications to anticoagulation
- anticipated intervention within the next 24 hours (use unfractionated heparin)

Precautions - Renal Impairment
- Fondaparinux is predominantly excreted by the kidney.
- Published guidelines recommend avoiding the use of fondaparinux in patients with creatinine clearance <30 mL/min.
- only 20% is removed by hemodialysis

Adverse Effects
- bleeding
- thrombocytopenia (less than unfractionated heparin)

Lab Monitoring
- platelets; Hgb at baseline, then q2days
- serum creatinine at baseline, then q3days or prn
- standard coagulation monitoring is not useful to guide therapy

Activity
- onset of effect: 20-30 minutes
- peak effect: 2 hours
- half-life: 17-21 hours (unfractionated heparin ~1.5 hours)

B ADMINISTRATION TIMES

Give the first dose as soon as possible. All subsequent doses may be adjusted to standard administration times (SMAT) within 4 hours of the previous dose time.

SMAT times for q24h medications are: **0600, 1000, 1400, 1800, 2200**
(e.g., if first dose given at 0200 h, give next dose at 2200 h on the same day or at 0600 h the next day)

C MANAGEMENT OF BLEEDING COMPLICATIONS/REVERSAL OF FONDAPARINUX

When hemorrhage is severe enough to warrant reversal of anticoagulation:

- there is no specific reversal agent
- consider Hematology consult
- Recombinant Factor VII (Novoseven®) may be considered; contact Blood Bank for Staff Hematologist approval

D INVASIVE PROCEDURES

1. PCI (Percutaneous Coronary Intervention)

The following should be considered when transitioning a patient receiving fondaparinux to the heart catheterization lab.

a. Pre-procedure

- Fondaparinux doses due the day of the scheduled procedure should be held prior to arriving in the lab and reassessed post procedure unless otherwise ordered.

b. Need for supplemental antithrombotic therapy

- For patients who have received at least one subcutaneous fondaparinux dose:
  - give unfractionated heparin 50-85 units/kg and target **ACT of 300 if no GP IIb/IIIa, *or* 200 if concomitant GP IIb/IIIa**

c. Timing of sheath removal

- Remove sheath 6 hours after last fondaparinux dose.
- May remove immediately, if radial procedure or closure device is used.

d. Restarting after sheath removal (if needed)

- Wait at least 2 hours post removal.

2. ACB (Aorto-coronary Bypass Surgery)

If ACB is anticipated:

- Hold fondaparinux at least 24 hours prior to surgery, or consider switch to UFH - consult with surgeon.

E GUIDELINES FOR CONVERSION TO ALTERNATIVE ANTICOAGULATION

1. Converting to Fondaparinux from UFH for ACS

- discontinue UFH
- give fondaparinux 2.5 mg SC
- administer 2.5 mg SC q24h starting the next day

2. Converting to UFH from fondaparinux

Note: Fondaparinux dose for treatment of VTE or PE is 5-10 mg according to weight.

- consider the reason for the change and weigh the risks of overanticoagulation against the risks of underanticoagulation
- consider renal function
- consider the timing of the last dose
- consult Pharmacy

F CAUTIONS FOR USE

1. Use antithrombins with caution in:

- Active abnormal bleeding or history of bleeding diathesis within the previous 4-6 weeks
- History of intracranial hemorrhage, intracranial neoplasm, arteriovenous malformation or aneurysm
- History of nonhemorrhagic stroke within the previous 30 days or any history of hemorrhagic stroke
- Major surgery or trauma within the previous 6 weeks
- History, symptoms, or findings suggestive of aortic dissection
- Systolic blood pressure >180 mmHg or diastolic blood pressure >110 mmHg not controlled on medication
- Known coagulopathy, platelet disorder, or pre-existing thrombocytopenia (platelet count $<100x10^6$)
- Concurrent administration of intravenous dextran
- Women who are pregnant or breast feeding
- Clinically significant liver disease
- Dependency on renal dialysis

2. Precautions

- No arterial or venous punctures unless required
- No intramuscular injections
- Caution with automatic blood pressure cuffs
- Avoid non-compressible sites for IV access (i.e., jugular, subclavian)
- Use saline lock for drawing blood

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Approved by: Cardiovascular Subcommittee - March 2011

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Notice to Healthcare Providers:

The Pharmacotherapy Handbook is intended to be used as a tool to aid in the appropriate prescribing and administration of cardiovascular formulary agents.

This information in this Handbook is intended for use by and with experienced physicians and pharmacists. The information is not intended to replace sound professional judgment in individual situations, and should be used in conjunction with other reliable sources of information. Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about Cardiovascular illness and the treatments in question.

Due to the rapidly changing nature of cardiovascular treatments and therapies, users are advised to recheck the information contained herein with the original source before applying it to patient care.

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