



Aortic Aneurysm/Dissection

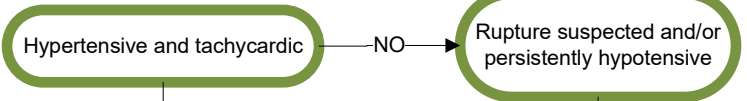


- Physical Exam Documentation**
- Blood pressure in both arms
 - Distal pulses in all four extremities
 - If imaging available, document results
 - Pericardial friction rub
 - Murmur

Aortic Dissection with Aortic Regurgitation

These patients are at high risk for decompensation with heart rate control, which can cause prompt pulmonary edema and cardiogenic shock.

If a dissection patient has known aortic regurgitation, a diastolic murmur, or a wide pulse pressure (approaching 80 to 100 mmHg), do not initiate heart rate control (e.g. esmolol). Consult referring, receiving or online medical control for further guidance.



- Therapy Goals**
- Control Pain
 - Control Heart Rate (goal 50-60)
 - Control Blood pressure (goal SBP <120 mmHg)
 - Give antiemetic

YES

Volume resuscitate
Permissive hypotension to maintain
SBP 80-100 mmHg



Labeltolol may be used as a bridge to esmolol.

Labeltolol 20 mg IV/IO

- Q 10 min PRN: 40 mg, 80 mg, 80 mg, 80 mg IV/IO
- Max single dose 80 mg IV/IO
- Max daily dose 300 mg IV/IO

Esmolol 500 mcg/kg over 1 min. loading bolus (1st loading bolus)

- Start infusion 50 mcg/kg/min
- To achieve target heart rate (50-60 bpm) q 5 min PRN:
 - Repeat loading bolus (2nd loading bolus) 500 mcg/kg over 1 min and increase drip to 100 mcg/kg/min
 - Repeat loading bolus (3rd loading bolus) 500 mcg/kg over 1 min and increase drip to 150 mcg/kg/min
 - After 3rd loading bolus, if target heart rate is not achieved, increase drip only by 50 mcg/kg/min q 5 min
 - Titrate infusion to max 300 mcg/kg/min

****IF BETA BLOCKER CONTRAINDICATED:****

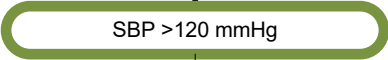
Diltiazem IV/IO

- Bolus 0.25 mg/kg IV/IO (Max 20 mg)
- Start infusion @ 10 mg/hr

If target heart rate not achieved in 15 min:

- Bolus 0.35 mg/kg IV/IO (Max 25 mg)
- Titrate infusion to 15 mg/hr

* Consider adding nicardipine early if BP is not responding to beta blockers or diltiazem



YES

* Nicardipine drip 5 mg/hr titrated up by 2.5 mg/hr every 10 min PRN to max infusion 15 mg/hr

This guideline does not substitute for sound clinical judgement.

DocuSigned by:
Nick Lehouillier 5/22/2025 | 11:18:50 AM CDT

Approved by: _____
Nick Lehouillier, RN, Chief Flight Nurse

Signed by:
William B. Weir 5/22/2025 | 5:13:55 PM CDT

Approved by: _____
William B. Weir, MD, Medical Director

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Reference:

Murphy DL, Danielson KR, Knutson K, Utarnachitt RB. Management of Acute Aortic Dissection During Critical Care Air Medical Transport. Air Med J. 2020 Jul-Aug;39(4):291-295. doi: 10.1016/j.amj.2020.04.017. Epub 2020 May 18. PMID: 32690306.

2022 ACC/AHA Guideline for the Diagnosis and Management of Aortic Disease: A Report of the American Heart Association/American College of Cardiology Joint Committee on Clinical Practice Guidelines. <https://www.ahajournals.org/doi/10.1161/CIR.0000000000001106>