Ontario Health
CorHealth Ontario

Ruptured Abdominal Aortic Aneurysm (AAA) Assessment, Consultation & Referral Guide

This guide is intended as a support tool to assist the emergency department clinician with initial diagnosis, immediate clinical management and vascular surgeon consultation and/or transfer to a vascular program for patients with moderate to high suspicion for ruptured AAA and should be applied using clinical judgement.

Ruptured AAA is a vascular surgical emergency. Consultation with a vascular surgeon should be initiated within 30 minutes of first medical contact with a patient with suspected ruptured AAA.

If vascular services are not available on-site, **phone CritiCall Ontario** to facilitate all ruptured AAA consultations with a vascular surgeon and transfers to a vascular program.

This information is for guidance only and is not a requirement.
*Time goals are not standards for medicolegal purposes. Times will vary based on patient presentation and other circumstances.
Consult, transfer and repatriation of the patient is supported by the Ontario Life or Limb Policy.[5]
Final decision to transfer remains at the discretion of the referring and receiving physicians.

*Time goal: **≤30 minutes** from first medical contact to CritiCall activation

CLINICAL PRESENTATION (Clinical assessment time goal: ≤10 minutes*)

- ☐ Abdominal pain or back pain AND hypotension[1-3] - proceed to point-of-care ultrasound (POCUS) or rapid radiologic assessment.
- ☐ Known AAA AND abdominal pain or back pain, hypotension or impending cardiovascular collapse[1-3] - proceed to rapid radiologic assessment IF it will not delay referral to a vascular surgeon.

If ruptured AAA is considered as part of differential diagnosis based on clinical presentation, a rapid radiological assessment or POCUS must be completed to confirm or rule out presence of AAA.[1-3] If no CT/CTA on-site or CT/CTA is not immediately available, proceed with request for vascular consult if clinical presentation and ultrasound findings suggest presence of ruptured AAA.

RAPID RADIOLOGIC ASSESSMENT (Rapid radiologic assessment time goal: ≤20 minutes*)

After-hours: Do not delay consult with vascular surgeon for on-call technologists and radiologists. Do not transfer patient to other hospital for purpose of CT/CTA. Proceed to consult based on clinical presentation and POCUS.

- ☐ Emergent abdominal and pelvic CT/CTA at 1mm cuts. CTA is preferred. Creatinine not necessary prior to CTA.
- ☐ Imaging should be automatically transferred to the Emergency Neuro Image Transfer System (ENITS). If unable to transfer to ENITS, a digital copy of imaging must be transferred with the patient.[1-3]

PHONE CRITICALL ONTARIO

1-800-668-4357

CONSULT WITH VASCULAR SURGEON

For all patients with suspected or diagnosed ruptured AAA, immediate consultation with a vascular surgeon should be facilitated by phoning CritiCall Ontario.[1,2]

Discussion with vascular surgeon to include:

- ☐ CTA imaging availability via ENITS/ local image repository or will be sent with patient[1-3]
- ☐ Goals of care[2]
- ☐ Medical comorbidities[2]
- ☐ Hemodynamics[2]
- ☐ Respiratory support
- ☐ Need and preparation for transfer

IMMEDIATE CLINICAL MANAGEMENT

For all patients with suspected and/or diagnosed ruptured AAA:

- ☐ Intravenous access with two large bore peripheral intravenous lines (central and/or arterial access not immediately necessary)[1,2]
- ☐ Permissive hypotension (to maintain mental status and a target systolic blood pressure of 70-90 mmHg)
- ☐ Blood products are preferred to treat hypotension.[1-3] Cross-match blood types if it will not delay patient transfer.
- ☐ Medication for pain[2]
- ☐ Foley catheter placement may be considered if it will not delay transfer.
- ☐ Other actions that may help to improve patient outcomes are patient warming[4] and avoidance of elective intubation.

RAPID TRANSFER

- ☐ Arrange immediate transfer if required. For cases confirmed Life or Limb, transportation will be arranged by CritiCall Ontario. For cases not confirmed Life or Limb, transportation to be arranged by referring hospital.[5]
- ☐ Need for physician or nurse escort to be determined by referring and/or receiving physician.
- ☐ Encourage transfer service to notify receiving hospital 30 minutes prior to expected arrival.

RECEIVING HOSPITAL (Arrival at receiving hospital to intervention start time goal: **≤30 minutes***)

- ☐ Emergent evaluation and intervention by receiving vascular team.

References

1. Mell MW, Starnes BW, Kraiss, LW, et al. Western Vascular Society Guidelines for Transfer of Patients with Ruptured AAA. *J Vasc Surg,* 2017;65:603-8.
2. Chaikof EL, Dalman RL, Eskandari RK, et al. The Society for Vascular Surgery practice guidelines on the care of patients with an abdominal aortic aneurysm. *J Vasc Surg*, 2018;67:2-77.
3. Hinchliffe RJ, Ribbons T, Ulug P, et al. Transfer of patients with ruptured abdominal aortic aneurysm from general hospitals to specialist vascular centres: results of a Delphi consensus study. *Emerg Med J,* 2013;30:483–486.
4. Spahn DR, Bouillon D, Cerny, V, et al. Management of bleeding and coagulopathy following major trauma: an updated European guideline. *Crit Care,* 2013;17(2):R76.
5. Ontario Life or Limb Policy: http://www.health.gov.on.ca/en/pro/programs/criticalcare/docs/provincial_life_or_limb_policy.pdf

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