Diagnosing acute aortic syndrome: New guideline for hard-to-diagnose condition

July 20 2020

A new guideline aimed at helping clinicians identify the difficult-to-diagnose acute aortic syndrome is published in *CMAJ (Canadian Medical Association Journal)*.

Acute aortic syndrome (AAS) is a life-threatening condition that underlies 1 in 2000 visits to the emergency department for severe chest or back pain. The rate of misdiagnosis is estimated to be as high as 38%, and the risk of death can increase 2% for every hour of delay in diagnosis.

The target audience for the guideline includes emergency physicians, primary care clinicians, internists, radiologists, vascular surgeons, cardiothoracic surgeons and critical care physicians as well as decision-makers and patients.

"This guideline is intended as a resource for practising clinicians, both as an evidence base and a guide to investigation for this high-risk aortic catastrophe," writes Dr. Robert Ohle, an emergency physician at the Health Science North Research Institute, Northern Ontario School of Medicine, Sudbury, Ontario, with coauthors.

Recommendations include:

- Assessment of risk factors, pain features and high-risk physical exam findings to establish pre-test disease risk
    - Risk factors include connective tissue disease, aortic

valve disease, recent aortic procedure, aortic aneurysm and family history of AAS
    - High-risk pain includes sudden-onset or thunderclap pain, severe or worst-ever pain, tearing, migrating or radiating pain
    - High-risk physical exam findings include aortic regurgitation, pulse deficit, neurological deficit and hypotension/pericardial effusion
- Diagnostic strategy
    - The guideline recommends no investigation of those at low risk, D-dimer testing of people of moderate risk and immediate electrocardiogram-gated computed tomography (CT) of the aorta for high-risk individuals

To help with decision-making, the guideline group created a clinical decision aid to accompany the guideline.

The guideline can be adapted by clinicians based on local circumstances, as a one-size-fits-all approach may not be feasible.

"This document may serve as a basis for adaption by local, regional or national guideline groups," write the authors. "For example, guideline implementation in an urban centre with 24-hour access to CT may differ from a rural or remote location that requires transfer of a patient with accompanying staff."

Provided by Canadian Medical Association Journal