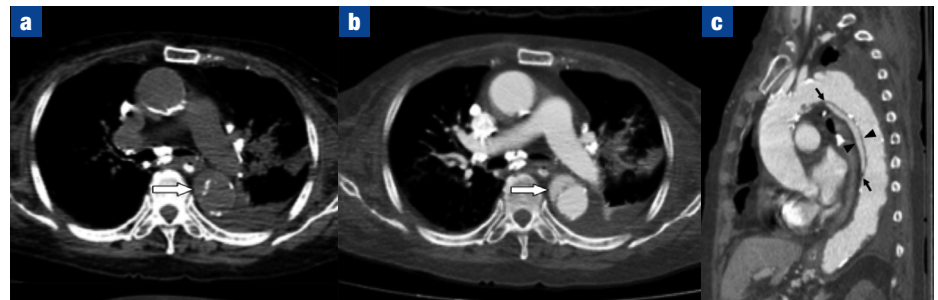


# Incidental finding of aortic dissection following cardiopulmonary resuscitation

**A** 91-year-old woman presented to the emergency department with abdominal pain. Non-contrast computed tomography revealed an abdominal aortic aneurysm 4 cm in diameter. Later, she suffered a seizure followed by cardiac arrest. After 6 minutes of cardiopulmonary resuscitation, she survived with a Glasgow Coma Scale score of 3.

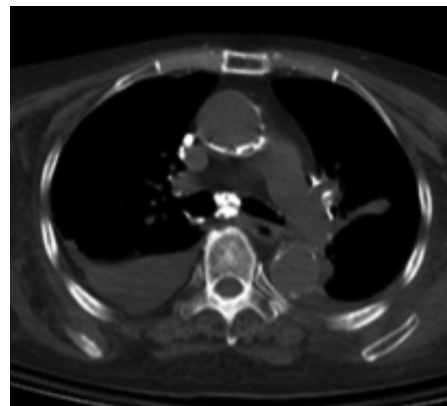
Non-contrast and contrast-enhanced computed tomography performed 6 hours after cardiopulmonary resuscitation incidentally found a short segment of aortic dissection (Figures 1b and c). Comparing the non-contrast computed tomography taken before cardiopulmonary resuscitation (Figure 2) to that taken after cardiopulmonary resuscitation (Figure 1a) showed a new crescent-shaped thickness outside the calcified intimal ring,

**Figure 1.** Imaging performed 6 hours after cardiopulmonary resuscitation indicating a short segment of aortic dissection. **a.** Axial view of the aortic dissection (white arrow) on non-contrast computed tomography. **b.** Axial view of the aortic dissection (white arrow) on contrast-enhanced computed tomography. **c.** Oblique sagittal view of the aortic dissection (black arrows and arrow heads) on contrast-enhanced computed tomography.



corresponding to an overt false lumen on contrast-enhanced computed tomography (Figure 1b and c).

**Figure 2.** Non-contrast computed tomography taken before cardiopulmonary resuscitation revealing no crescent-shaped thickness outside the calcified intimal ring.



This case supports the notion of the ‘nutcracker’ effect on the aorta caused by chest compression as part of cardiopulmonary resuscitation. Caution is needed regarding the depth of chest compression in cardiopulmonary resuscitation and also the possibility of an overlooked iatrogenic aortic dissection in survivors of cardiopulmonary resuscitation (Hellevuo et al, 2013; Stiell et al, 2014). **BJHM**

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Stiell IG, Brown SP, Nichol G et al; Resuscitation Outcomes Consortium Investigators. What is the optimal chest compression depth during out-of-hospital cardiac arrest resuscitation of adult patients? Circulation. 2014 Nov 25;130(22):1962–1970. <https://doi.org/10.1161/CIRCULATIONAHA.114.008671>

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