Three-dimensional demonstration of the collateral circulation to the artery of Adamkiewicz via the thoracodorsal and inferior phrenic arteries

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A 75-year-old woman with a thoracic aortic aneurysm (Fig. 1) was admitted for thoracic endovascular aneurysm repair (TEVAR). TEVAR was performed successfully without spinal cord ischaemia. Postoperative computed tomography demonstrated collateral blood flow to the artery of Adamkiewicz via the bilateral thoracodorsal arteries and left inferior phrenic artery (Fig. 2).

Fig. 1. Preoperative evaluation of the thoracic aortic aneurysm and the artery of Adamkiewicz using a 64-slice computed tomography. The anterior view of volume-rendered image with semitransparent aorta and skeletal system shows the artery of Adamkiewicz (arrow) originating from the left 9th intercostal artery (ICA 9). The heart and ascending aorta are electronically removed to show the artery of Adamkiewicz.

Fig. 2. Postoperative evaluation using the same computed tomography unit. The anterior view of volume-rendered image with semitransparent aorta and skeletal system shows the artery of Adamkiewicz (arrow) and occluded left 9th intercostal artery at the ostium, which is covered by the stent-graft. The image also shows collateral blood flow to the artery of Adamkiewicz from the bilateral 9th intercostal arteries (ICA 9) via the bilateral thoracodorsal arteries (TDA) and left inferior phrenic artery (IPA).