Strategies to salvage inadvertent bilateral renal artery coverage during endovascular aneurysm repair.

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Bilateral renal artery occlusion caused by malposition of a stent-graft occurs rarely, but it’s probably underreported. If revascularization of the kidneys by endovascular techniques fails, there is no consensus as to the optimal approach.

A 72-year-old female with a 6 cm infra-renal abdominal aortic aneurysm was treated by endovascular means with a standard bifurcated graft. On completion angiogram, both renal arteries were accidentally occluded. Through a left percutaneous brachial approach, the right renal artery was catheterized and a chimney stent was deployed. This was not possible for the left renal artery. A retroperitoneal surgical approach was, therefore, carried out and a retrograde chimney stent was implanted to restore blood flow. After three months, both renal arteries were patent and renal function not different from the baseline. Both endovascular, with percutaneous access via brachial artery, and open retroperitoneal approach, with retrograde catheterization, are feasible rescue techniques to recanalize accidentally occluded renal arteries during EVAR.