HYBRID SURGICAL REPAIR FOR AN UNINTENTIONAL COVERAGE OF RENAL ARTERIES DURING IMPLANTATION OF AN ILIAC BRANCH ENDOPROSTHESIS

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INTRODUCTION
Unintentional renal artery occlusion after endovascular aortic aneurysm repair (EVAR) is an uncommon but severe complication. We describe an unusual hybrid bail-out maneuver, to overcome this potential devastating complication.

METHODS AND RESULTS
A 78-year-old man with a 3.5 infrarrenal aortic aneurysm and a 4 cm right common iliac artery aneurysm was treated with a Jotec bifurcated endograft (E-Tegra) and a right iliac branch (E-liac). Completion angiogram showed an accidental coverage of both renal arteries with the free flow uncovered stent extending up to the superior mesenteric artery. We hypothesized that the intraoperative migration of the bifurcated endograft was associated with retrograde mobilization of the main body during deployment of one iliac limb extension.

An open conversion was immediately performed with exposure of the aorta and both renal arteries. In order to limit the renal ischemia time, proximal aortic control was achieved by means of a large balloon catheter placed through the axillary artery. A para-renal arteriotomy, was then performed. By cutting both the fabric and the struts of the stent graft, an "in situ" fenestration at the level of both renal ostia was accomplished. The procedure was then completed without incident.

The patient had a satisfactory postoperative recovery course with stable renal function. One month follow-up CT scan demonstrated patent renal arteries, and no evidence of device migration or endoleak.

CONCLUSION
Unanticipated coverage of major branch vessels during EVAR can be disastrous and lead to conversion to graft explantation or emergent renal artery revascularization if endovascular rescue procedures are not feasible. In our case, this unexpected complication was successfully treated through a hybrid approach restoring the perfusion of both renal arteries and preserving the aneurysm exclusion.