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Endovascular Treatment of Juxtarenal Abdominal Aortic Aneurysms Recurring to the "Vent Technique"

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Abstract

Background: Juxtarenal abdominal aortic aneurysms represent 15-20% of all abdominal aortic aneurysms (AAAs). The gold standard of treatment is represented by open surgical repair (OSR). Patients judged unfit for OSR could be submitted to fenestrated endovascular aortic repair (FEVAR) or the chimney technique. FEVAR requires 3-4 weeks for endograft production, a minimal length of 4 mm for proximal aortic neck and a large access vessels diameter, with high costs. The traditional chimney technique, feasible also in urgent cases, has a risk of type IA endoleak due to the space created between covered stents introduced into visceral arteries and the endograft.

Methods: In the present article, we report our experience about juxtarenal AAA (jAAA) treatment in 5 patients, recurring to uncovered bare metal stents associated with the ultralow profile Ovation endograft.

Results: No intraoperative complications or type IA endoleaks were recorded. Primary clinical success at 1 month was also 100%. During a mean follow-up period of 12.1 ± 3.6 months (range, 9-15 months), no complications related to aneurysm were recorded.

Conclusions: The technique reported represents a valid endovascular option for jAAA treatment in patients at high risk for OSR. With respect to FEVAR, urgent patients should also be treated. With respect to traditional Ch-EVAR, the risk of type IA endoleak is reduced, with a lower rate of reoperation during follow-up. Preliminary clinical results are promising.