

# **Penetrating abdominal aortic ulcer endovascular treatment: Could ultra-low profile endograft be considered a valid alternative? A single center experience**

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## **Objective:**

Abdominal Penetrating aortic ulcers (PAU) represent an aneurysmal degeneration of a focal atherosclerotic lesion with peculiar characteristics: Narrow aortic carrefour, severe calcified aorta and iliac arteries .

The aim of this retrospective study is to investigate mid-term outcomes of endovascular treatment with ultra-low profile endograft vs standard EVAR.

## **Methods:**

In our department, between January 2017 and June 2022, 33 consecutive patients underwent an endovascular procedure for abdominal PAU : in 17 patients EVAR technique, in 16 patients EVAR technique with ultra low-profile stent grafts

The main aneurysm characteristics were narrow aortic bifurcation in 30 patients, mild-severe aortic calcified neck in 10 patients. The average diameter of the aneurysm was  $45,97 \pm 13,77$  mm.

Mean FU was 40 months. Follow up was performed with an annual angio-CT scan

## **Results:**

Technical success was achieved in all patients (100%).

At the mean FU, we detected type 2 EL in 4 patients (16,6%): 2 early EL2 and 2 late EL2.

At mean follow-up a complete aortic endograft occlusion due to coagulative disorder Sars Cov 2 related. At long term FU any type IA/III EL was detected.

At mean FU, ultra low-profile endograft showed a mean aneurysm sac shrinkage of 7,06%, despite standard EVAR , which showed a mean aneurysm sac shrinkage of 6,17%.

## **Conclusion:**

In case of infrarenal aortic lesions , EVAR represents the first line treatment in comparison to surgical repair, expecially in case of calcified aorta.

Ultra low-profile stent grafts could become a valid alternative , ensuring a navigability of the endograft end reducing kinking or fractures of the iliac components.