

# **TITLE: The new abdominal aortic stent graft- personal experience with Ovation and Aorfix stent graft**

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Introduction:

The newer type of stent graft can offer an endovascular option (EVAR) in the treatment of the abdominal aortic aneurysms (AAA) in the challenging anatomy due to improvement in the design and material of the stent graft. The present is personal experience using the two newer type of stent graft in the treatment of challenging AAA.

Material and Methods:

57 patients with AAA >5- 5.5 cm or/and iliac artery aneurysm > 3.5 cm, with challenging anatomy defined as (short neck <10- 15 mm, conical shape, the significant amount of the thrombus and calcifications, highly angulated neck > 75 degree, or severe angulated iliac vessels, or small iliac vessels) have been treated at the Odense University Hospital in the period January 2017 to December 2017.

The technical success defined as implanted stent graft without endoleak type 1 or type 3 was analyzed. Further, perioperative and early complications were noted. Follow up consist of three months computed tomography control and yearly after either with CT or with ultrasound with contrast.

Results:

In all 82% were male patients. The mean age was 77, 8 +-6, 6 (range:63-89). The mean AAA diameter was 62, 6+- 8, 2 (range: 50-87). In 37 patients (65%) Ovation stent graft was deployed (Fig.1-4), and in 20 patients Aorfix stent graft was deployed (Fig.5-7).

The technical success was 92%, wherein 53 of the patient's stent graft were deployed without endoleak type 1 or type 3 on the final angiography. In 4 patients (8%), endoleak type 1 and type 3 were recorded, wherein in the three cases endoleak 1 were present and in one case endoleak type 3. No mortality or significant complications occurred during or after EVAR. Type 3 endoleak was successfully treated with additional limb extension deployment. In two cases, coil embolization between the stent graft and aortic wall successfully stop endoleak type 1. In one case additionally, aortic cuff and chimney and embolization on the two occasions solved the problem with endoleak type 1.

The mean follow-up was 7, 5 months (range: 3-18). Aside from the described endoleak, there were no new cases with endoleak type 1 or type 3 or AAA enlargement.

Conclusion:

The newer type of the stent graft can provide the reliable endovascular option in the challenging cases at least in the short term follow-up period. The longer follow-up data are needed for the complete picture.

