resources. A multidisciplinary approach might improve the quality of care, effectiveness and cost reduction
Purpose: The aim of this study was to evaluate the effects of the introduction of a dedicated multidisciplinary aortic team ("aorta clinic") for pre-operative and follow-up care, in a mid-size tertiary referral center, on quality of care and costs.
Methods: In this longitudinal study, the number of hospital visits, aortic imaging techniques, including computed tomography (CT) and echocardiography (TTE) performed and the cost of these were compared in a cohort of 156 patients with a dilated thoracic aorta during a 12-month period, before and after the creation of the "aorta clinic" composed by dedicated cardiologists, cardiac surgeons and radiologists.
Results: After the introduction of the dedicated "aorta clinic", the total number of hospital visits during the 12-month period, decreased from 151 to 115 (24%). The number of CT performed fell from 139 to 28 (80%) and the number of TTE performed at the imaging lab decreased from 75 to 20 (74%). The number of TTE performed at same visit to the aorta clinic increased from 0 to 149 (90%). All this resulted in a cost saving of 45986 Euros over the 12-month period.

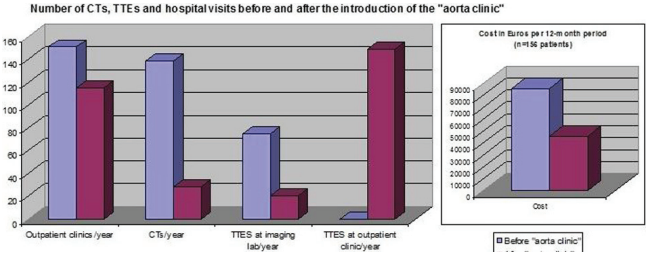

Figure 1

Conclusion: The introduction of a dedicated aorta clinic in a mid-size tertiary referral center resulted in a more efficient delivery of specialised care.

P5494
Aortic dilatation rates in marfan syndrome versus bicuspid aortic valve disease - a CMR study

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Background: Bicuspid aortic valve (BAV) and Marfan syndrome (MFS) are congenital conditions both related to aortic dilatation and dissection. Monitoring of the aortic size through different imaging modalities is essential for the management of these patients and appropriate timing of prophylactic surgery based on current guidelines. CMR data on the rate of progression of different aortopathies are limited. We aimed to analyze progression rates in BAV versus MFS patients using standardized cardiovascular magnetic resonance (CMR) protocols.
Methods: This was a single-centre observational study, focusing on adult patients with BAV or genetically proven MFS who underwent routine CMR studies at our centre with a minimum of two studies at least one year apart. The CMR protocol included cine-imaging and 3D contrast-enhanced MR angiography (3D-CE-MRA) covering the ascending and descending thoracic aorta. From the first and last available 3D-CE-MRA images of the aorta, double oblique measurements were performed at the level of the aortic root (cusp-to-commissure) and of the ascending and descending aorta.
Results: Overall, 22 patients with BAV (4 females) and 16 patients with MFS (5 female) were included into this study. While gender distribution was comparable, MFS patients were younger than BAV patients (31.6±11.9 yrs vs. 47.0±13.6 yrs, $p<0.05$). Absolute aortic root size was comparable in both groups (42.3±6.6 mm in BAV vs. 42.9±4.0 mm in MFS, p=ns) whereas the ascending aorta was larger in BAV patients than in MFS patients (46.6±6.7 mm vs. 32.2±4.8 mm, $p<0.05$). Diameters of the descending aorta were comparable (26.6±4.4 mm vs. 24.6±4.9 mm, p=ns). At first presentation, 68% of BAV patients and 81% of MFS patients showed enlargement of the aortic root (defined as >40 mm diameter). After a mean follow-up of 2.8±1.2 yrs, progression of aortic root diameter was observed in 50% of MFS patients vs. only 23% of BAV patients. There was progressive dilatation in 19% of MFS Patients and 36% of BAV patients at the level of the ascending aorta. The mean annual rate of progression was highest in MFS patients at the aortic root (0.42 mm/year), whereas a significantly slower dilatation was observed in BAV patients at the aortic root (0.06 mm/year, $p<0.05$, Figure). In contrast, no statistically significant differences in rate of progression were detected at the level of the ascending aorta (BAV 0.18 mm/year vs. MFS 0.08 mm/year; p=ns).
Conclusion: MFS patients mainly suffer from aortic root aneurysms, whereas BAV patients frequently show aortic aneurysms in the aortic root, the ascending aorta or both. The highest progression rate occurs in MFS patients at the level of the aortic root. But a significant dilatation may also occur in BAV patients - even during a relatively short time period of 2–3 years – justifying close diagnostic follow-up.

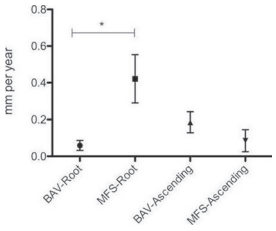

Figure 1

P5495
Postmarketing adverse events related to the use of endoanchors in abdominal aortic aneurysm repair

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Introduction: An unfavorable proximal neck anatomy is the most common cause of Endovascular abdominal aortic aneurysm repair (EVAR) failure due to proximal type 1A endoleak or migration. Over the last few years, endo-stapling devices like Aptus Endosystem® has been used to reduce this risk in patients with hostile neck anatomy. Preliminary evidence (mostly from the ANCHOR registry) has shown efficacy and safety of Endoanchors use. The aim of this study is to assess real world safety and efficacy of this device.
Methods: We queried data from the publicly available Manufacturer and User Facility Device Experience (MAUDE) database to identify device–related adverse events of Endoanchors since FDA approval. We queried all available adverse event reports from July, 2015 to August, 2017. An estimate of total devices implanted in the United States was obtained through direct correspondence with the company.
Results: The query produced 229 separate relevant reports describing possible adverse events directly or indirectly related to the device use. The most common reported adverse event was failure to resolve or recurrence of the type IA endoleak (58% of reports) followed by device dislodgment or fracture (31% of reports). In all there were 123 events (estimated 1.7% of all device use) (Figure-1). There were 65 (0.9%) instances of device dislodgment or fracture.

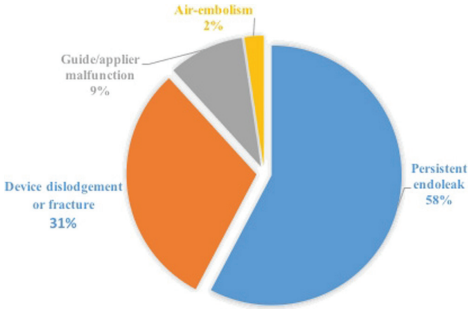

Figure-1

Discussion: Our data showed a contemporary review of real word safety and possible complications of Endoanchors use. Continuing to monitor the safety and efficacy of this device is required for continued success in this field as the Endoanchor system continues to gain more popularity. Furthermore, a large number of the adverse events found in the post-market analysis were related to device dislodgment or fracture. This can be looked at as a potential area for improvement from device design and operator training.

P5496
Effect of the time delay of PDA closure on aortic stiffness index and its relation with cardiac function

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Background: Patent ductus arteriosus (PDA) causes volume overload of the left side of the heart. Stiffening in the larger central arterial system, such as the aortic tree, significantly contributes to cardiovascular diseases in older individuals and is positively associated with systolic hypertension and coronary artery disease. In the present study we tried to evaluate the effect of time delay of PDA closure on aortic stiffness and its relation with cardiac function before and after transcatheter closure of PDA.
Methods: Our study population consisted of 46 children, who were planned for Transcatheter closure of PDA then divided into two subgroups (group A) in whom PDA device closure were done before the age of one year, (group B) in whom PDA device closure were done after the age of one year and 46 healthy control children. All patients had clinical and/or echocardiographic Evidence of hemody-