

## Page for the General Public

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(on behalf of the Editorial Office)

The following pages summarize and review this issue's articles for an audience without a background in medicine or research.

*Domenico Calcaterra et al.: "Aortic Root Reconstruction with a New Dacron Graft Featuring Prefabricated Coronary Side Branches"*

When the first segment of the aorta, the body's main artery, needs to be repaired or replaced, one of the challenges consists of the necessity of reimplanting the coronary arteries into the graft prosthesis used for replacement. The coronary arteries supply blood to the heart muscle and branch from the aorta right at its root. *Calcaterra et al.* developed a graft prosthesis that has two prefabricated branches to attach the coronary arteries. The authors report a group of 8 patients in which they used the new graft. None of the patients had any complications related to the graft. They, therefore, suggest that their new graft might render aortic root reconstructions easier and safer, especially in cases

expected to be difficult. However, the small group of patients this graft was used in so far does not allow an overall recommendation of a broader use of this graft yet.

### State-of-the-Art Review

*Adam J. Brownstein et al.: "Genes Associated with Thoracic Aortic Aneurysm and Dissection: An Update and Clinical Implications"*

An aneurysm of the thoracic aorta is a disease in which the body's main artery dilates in the segment in the chest, which can lead to fatal rupture. Two decades ago it was discovered that this disease is more common in some families, and that certain genes increase the risk of developing thoracic aortic aneurysms. 29 nine genes have been discovered so far, and about one quarter of patients with thoracic aortic disease are found to carry a mutation in one of them. Since the disease is often silent until rupture occurs, the identification of risk factors is crucial to identify patients at risk. Some of

these genes are associated with specific clinical and anatomic features of the disease, and therefore should to be taken into account when planning treatment and recommending family screening. In their article, *Adam J. Brownstein et al.* provide an overview of the current knowledge on genes associated with thoracic aortic aneurysm.

### Case Reports

*Paolo Bianchi et al.: "Occlusive Shrinkage of Ovation Endograft™ Presenting as Acute Lower Limbs Ischemia: Effective Endovascular Management"*

The *Ovation Endograft™* is a graft prosthesis that can be inserted e.g. through the vessels of the groin into the aorta, the body's main artery, to cover a dilated segment, namely an aneurysm. The special feature of this graft system is that it is equipped with sealing rings that are filled with a substance after deployment in order to avoid any blood flow along the graft into the aneurysm sac. *Bianchi et al.* report



a case of a patient in whom this endograft was used and in whom the filled sealing rings started to shrink considerably after implantation. Subsequently, the blood flow to the patient's legs through the graft was severely impaired. In order to reopen the narrowing of the prosthesis, another stent graft was inserted in the narrowed segment. The patient recovered without any further complications. The *Ovation Endograft™* was designed to improve the sealing capabilities of the stent grafts, but shrinkage is a commonly reported complication. *Bianchi et al.* report a possible solution to this complication.

*Arne de Niet et al.: "A Case of Primary Aortoduodenal Fistula and Abdominal Aortic Aneurysm in a Patient with Chronic Q-fever"*

*Arne de Niet et al.* report a rare case of a patient who had an infectious disease called "Q-fever" which is transmitted by animals. In rare cases, it has been associated with the development of aortic aneurysms, a dilation of the body's main vessel. The patient in this case report was found to have an aortic aneurysm in his abdomen. The aneurysm ruptured into the patient's duodenum (a part of the

bowel), which is called an aortoduodenal fistula, and caused heavy bleeding into the bowel. The patient underwent urgent surgery. After confirmation of Q-fever, he received antibiotic treatment. He recovered without further complications.

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