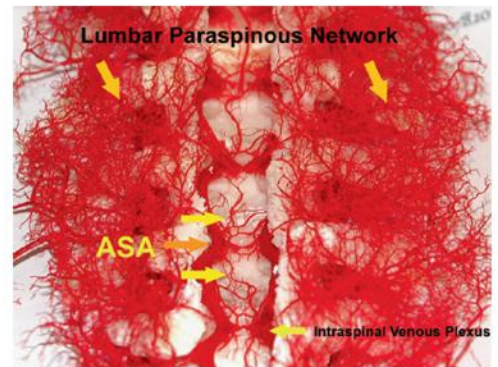


Spinal Cord Perfusion Preservation

Despite very optimal results in the treatment of the thoracic and thoraco-abdominal aortic aneurysms by surgical and endovascular means, the problem of revascularization of the aortic branches remains unsolved. The new techniques of fenestrated stent grafting and extra-anatomical debranching have been introduced, but the results so far remain suboptimal. There are several studies that show that significant resection of the thoracoabdominal aorta (otherwise stentgrafting) results in sacrificing of the segmental arteries, leading to immediate or delayed paraplegia. This finding is supported by different experiments performed on pigs, that confirmed existence of a very rich network of vessels surrounding the spinal cord and the paraspinal muscles.



There are several factors that cause the spinal cord injury after the endovascular and surgical aortic aneurysm treatment: very small absolute flow to the spinal cord from the collateral network and intraoperative ischemia.



Distal spinal cord perfusion, reduction of spinal cord metabolism (hypothermia), preservation of the inflow through the subclavian and hypogastric artery and high mean arterial pressure (even 24 hours after the treatment) are very important. It is recommended to complete monitoring of somatosensory evoked potentials, keeping the central venous pressure low and draining cerebrospinal fluid to avoid impeding spinal cord perfusion.

Spinal Cord Perfusion Preservation Cardiatiss/TehMED

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Special points of interest:

- Spinal cord perfusion preservation is considered as the crucial part of the thoraco-abdominal aortic aneurysm treatment, both during surgery or endovascular therapy. If not performed well, patient might end up with immediate or delayed paraplegia.
- Flow Modulation does preserve side branches during the treatment of the aortic aneurysm disease

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 Cardiatis products for Slovenia*

**We are on the web:
 www.tehmed.si**

TehMED— Who Are We?

TehMED is a young and dynamic company based in Ljubljana - Slovenia. TehMED is the certified distributor of the Cardiatis (Isnes, Belgium) products for the Slovenian market. The company is primarily focused at the distribution of the medical products, used in the interventional radiology and minimally invasive surgery. Presentation of the Cardiatis product range can be done upon request to the Commercial and Marketing Department of the TehMED company (see the contact data to the left).

Flow Modulation in Preservation of the Spinal Perfusion

Flow modulation is a new treatment concept of the thoraco-abdominal aortic aneurysm disease.

The concept is based on 2 major premises:

- Recanalization of the flow distally from the weakened aneurysm wall, thereby lowering blood hemodynamic shear stress against the vessel wall
- Preservation of the side branches needed to provide for perfusion of the spinal cord and the paraspinal muscles, as well as the surrounding organ anatomy

The multilayer stent strut configuration is designed such that it minimizes the blood inflow in the aneurysm sack, propelling as such the parent vessel blood stream and decreasing the intra-aneurysmal flow to the level where blood stagnation leads to thrombosis initiation.

The blood flow to the side branches is laminated and completely preserved, providing satisfactory perfusion level of the surrounding anatomy.

