Letters to the Editor

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AN IDEA FOR CONSTRUCTION OF A NEW MODIFICATION OF THORACIC ENDOGRAFT FOR TREATMENT OF DELAYED PARAPLEGIA

To the Editor:

Delayed spinal cord ischemia after thoracic aortic aneurysm repair is an infrequent but devastating complication. According to previous results, paraplegia after endovascular treatment of thoracic aortic aneurysms occurs at some rate between 0% and 12%.1 The mechanisms of spinal cord ischemia (SCI) in endovascular endografting are poorly documented, with a few mechanisms proposed.2,3 Regardless of the cause at the time of development, however, cerebrospinal drainage and mean arterial pressure manipulation are the only treatments currently available. A new and interesting treatment approach by Reilly and Chuter4 has led us to propose a novel endograft model to aid in the treatment of delayed paraplegia.

During thoracic endograft fabric creation, it is essential to plan a circle partial fenestration in the middle part of the graft. The diameter is estimated according to the previously performed experiments. That fenestration is then covered with patch slightly attached over the edges, completely fixed in less than half the circumference, with enough strength to be easily partially opened. That patch in turn is connected with wires to the introducer sheath left in the femoral artery after stent graft deployment, as a backup. In case of delayed paraplegia development, a string can be pulled to open the fenestration in the graft, allowing a type III endoleak to evolve. The force of blood flow then keeps the patch open (Figure 1).

The introduction of endovascular techniques as an alternative option for the treatment of thoracic aortic disease gave rise to some optimism because the risk of paraplegia seemed reduced to somewhere in the range of 0% to 6%.5 Nevertheless, the risk of SCI remains a constant threat, with only a very few treatment techniques that can give us some hope for better results. It should be mentioned that delayed paraplegia is somewhat more frequent after endovascular treatment of thoracic aortic aneurysms than after open thoracoabdominal aortic aneurysmal repair. Reasons for this difference,