

Covered Stents-Historical Short Note

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Editorial

The first commercially available covered stent was Corvita®, which was developed in Belgium by Jean Pierre Becquemin [1]. In 1997, we began our experience with Corvita, it was a braided elgiloy frame coated by urethane fibers that has been replaced in sequence by Wallgraft. In 2001, I did a monograph "Percutaneous treatment of the vascular trauma" to be holder from the Brazilian college of surgeons (Figure 1).



Figure 1 Braided elgiloy frame coated by urethane fibers has been replaced in sequence by wallgraft.

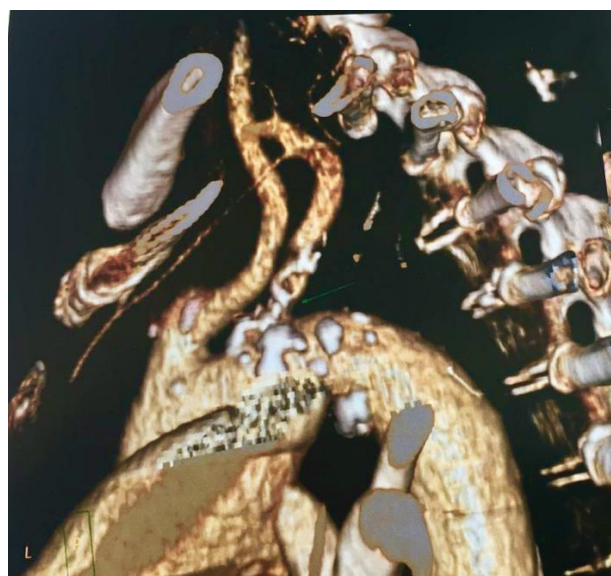


Figure 2 Angiotomography before treatment of a very calcified left subclavian artery.

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Covered stents have expanded the use of endovascular procedures [2]; they can be either with Dacron (Wallgraft®) or polytetrafluoroethylene (Solaris®, Viabahn®, iCast® (outside the United States, Advanta® V12), Jostent®, Fluency®) and can be balloon-expandable (iCast® or Advanta® V12) or self-expandable (Solaris®, Viabahn®, Jostent®, Wallgraft®). The treatment of



Figure 3 During the endovascular procedure, before covered stent deployment in a symptomatic patient with subclavian steal syndrome.



Figure 4 Arteriography control during surgery.

vascular disease has changed dramatically during the last two decades. They are used mainly for the treatment of traumatic arterial lesions [3], arteriovenous fistulas or false aneurysms, peripheral aneurysms and, more recently, for the treatment of obstructive vascular disease of the aortoiliac and femoropopliteal sectors. To treat visceral artery aneurysms (vaas) covered stents can be useful, when the artery is not so tortuous and the vaas

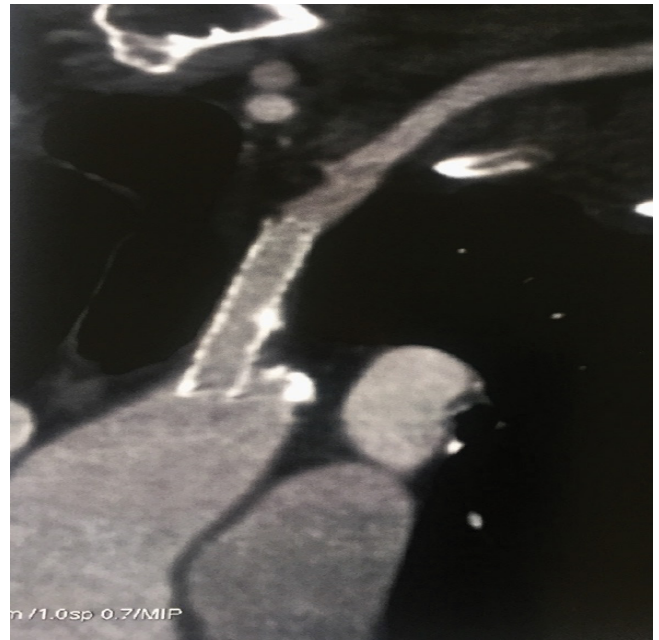


Figure 5 Final control after six months and patient with improvement of symptoms.

are not intraparenchymal [4]. The major technical limitations to implant it in vaas are severe tortuosity or sometimes small caliber arteries. There are a lot of available stent grafts, we are getting experience, now, with the new Brazilian covered stent, Solaris® (Figures 2-5). This stent-graft is more radiopaque than other conventional nitinol stents available in Brazil, it is a flexible self-expanding stent graft with PTFE. Those stents are a barrier to the ingrowth of neointimal hyperplasia, sealing off the inflammatory surface, and thus have the potential to inhibit restenosis [5].

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