ADVERTORIAL

First-in-man use of new large covered stent completed successfully

In this interview, Professor Piotr Kasprzak (Regensburg, Germany) speaks to Vascular News about the first-in-man use of the new BeGraft Aortic covered stent system (Bentley).

Could you tell us about your first experience with the new BeGraft Aortic covered stent system?
The BeGraft Aortic stent system received CE mark for the treatment of aortic coarctation and iliac occlusive disease in October 2016. We implanted the first device worldwide on 31 October 2016. The first patient treated was a 49-year-old with coarctation of the aorta (CoA), significant systolic pressure gradient and resulting cardiac insufficiency with a 50% ejection fraction. The coarctation was unexpectedly diagnosed after the patient suffered a stroke with dysarthria and facial paresis. We decided to treat the patient using a covered stent with a diameter of 20mm and a length of 48mm. The procedure was successful and no intensive care unit stay was required. Postoperative computed tomography angiography showed a very good procedural result and the patient was discharged shortly after the endovascular procedure.

Why did you decide to use this stent and what are its benefits compared to others for the treatment of CoA?
We already had a positive experience in the treatment of similar pathology using the large balloon-expandable covered Atrium Advanta V12 stent (Maquet Getinge Group), which is no longer available in the diameters required for the treatment of aortic coarctation. The BeGraft Aortic covered stent system has several advantages, such as the fact that it allows for very accurate placement, low crimped profile, has high radial strength, is covered and allows for significant over dilation in lesions that would otherwise present an increased risk of vascular damage. I anticipate that it will be a valuable tool in the treatment of coarctation of the aorta in the future.

You used the stent for a CoA, but the incidence is low for this disease. What are the other possible treatment options for this large aortic covered stent?
We have already applied the stent for treatment of CoA in two patients in the last three months. Besides its indication for the treatment of CoA, the stent is indicated for restoring and improving the patency of iliac arteries (as per the instructions for use).

In my opinion, a large diameter covered stent with these kind of attributes can be a viable treatment alternative not only in CoA, but also in focal lesions located at the infrarenal aortic and aortoiliac level. This treatment concept could indeed include complete endovascular reconstruction of the aortic bifurcation, also known as CERAB.

In these cases, why would you use this stent and what are the benefits for the patient?
In recent years, there have been advancements in the standard-of-care treatment for aortoiliac occlusive disease with an endovascular-first strategy being promoted, even for the most complex lesions. The immediate benefits for the patient are obvious, avoidance of retroperitoneal access/laparotomy and aortic clamping, shorter hospital stay, immediate mobilisation. As I mentioned before, the combination of high radial force and option for over dilation with a large covered stent enables us to treat lesions requiring large diameter devices with less risk of restenosis or vessel damage and higher patency rates than would be possible with bare metal stents.