“Crush Stenting” a new approach to treat occluded iliac stent

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1 Introduction

Iliac stent thrombosis is problematic. When intraluminally stent recanalization is not possible, surgery is often indicated. Crush stent technique is known for coronary stent but not for peripheral artery stent. The aim of this report was to demonstrate feasibility of crush stent technique also for iliac artery.

2 Case Report

A 55 years old woman was admitted in our department for a critical lower limb ischemia due to thrombosis of left common iliac stent implanted 2 years earlier for claudication. The ankle-brachial index was 0.5. Our initial strategy was to cross intraluminally the occlusion and to use a drug-eluting balloon.

However, we failed to achieve an intraluminally stent recanalization, so we performed a subintimal recanalization of the occluded stent. The wire crossed the occlusion completely outside stent through the subintimal space.

Therefore, we deployed an 8 x 112 mm Wall-Stent (Boston Scientific), covering all the common and external iliac artery.

Firstly, we performed a balloon angioplasty, a 7mm balloon was inflated at eight ATM pressure and contributed in crushing of the thrombosed stent.

The final angiogram showed a patent iliac conduit with a total flattening of the old stent.

Post-operative course was favorable with symptomatic relieve. The ankle-brachial index was improved to 0.85, and duplex ultrasound showed patency of the iliac artery at 1,6 and 12 months.

3 Discussion

Crush stent technique is known in interventional cardiology but rarely practiced. In peripheral artery disease, intentionally crush stent technique was reported only in one case through literature which was a superficial femoral stent [1].

In our case, occluded stent was totally crushed. We think that crushing of the stent is certainly risky but associated to an increase of diameter of the subintimal space allowing a better deployment of the new stent.

Subadventitial crushing can involve part of the occluded stent or the whole stent depending in the beginning and the end of the dissection. In our case, beginning of the dissection was performed outside the occluded stent and re-entry was achieved in true aortic lumen, so Subadventitial crushing has involved the whole stent.

4 Conclusion

The originality of our report remains that this is the first crush stent technique reported for an iliac stent to our knowledge. This technique can be an alternative to surgery especially in patients with heavy comorbidities.