

Stent angioplasty of ACI stenosis: Experience with a new protection system

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Purpose:

In a prospective study, incidence and kind of complications using protection system "TwinOne" are compared with conventional filter systems.

Methods:

Patients, where a stent angioplasty of ACI will be performed, are neurological examined before and after the intervention (NIHSS). First stent implantation is done without protection. Protection system TwinOne is not inserted before post dilatation of stent – this is done due to experience that most embolic complications arise by post dilatation. The system consists of a distal Latex occlusion balloon where on its guidewire a 6 x 20 mm dilatation balloon is moveable pre-mounted. The occlusion balloon is placed at distal stent ending and blood flow is stopped. After this the dilatation balloon is placed inside waisted part of the stent and inflated. Over a long 6F-Sheath, proximal located to the stent, 40 ml are aspired, followed by 20 ml injection of saline to flush the still occluded stent. Then the whole system is removed and blood flow released.

Results:

Protection system TwinOne is very easy in handling. Occlusion time was between 2 and 4 minutes, getting shorter consecutively. Until now 10 patients were consecutively included in investigation and could be treated without any problems.

Conclusion:

Complications of stent angioplasty arise especially during post dilatation of the stent according to our experience. The new protection system impresses due to its easy handling. It possesses as well technical as economical advantages against well-known, occluding protection systems. Positive results so far have to be confirmed by higher patient numbers.