

A Case of Successful Stent Deployment into the True Lumen Using the Balloon Screen Technique for a Calcified Coronary Lesion with Dissection

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Background:

Contemporary strategies for heavily calcified coronary lesions are recommend lesion preparation using dedicated debulking devices. Although rare, the guidewire can sometimes enter a false lumen located behind the calcified plaque. By deploying a long semi-compliant balloon in the false channel, we performed a “balloon screen,” which allowed precise stent deployment in the true lumen, successfully overcoming this rare and challenging scenario.

Case summary:

A 77-year-old man presented with CCS class III angina. Coronary angiography showed severe, diffuse, bifurcated calcified disease in the LAD. The lesion was classified as AHA type 4. We performed rotational atherectomy and scoring balloon angioplasty. Following this, the first wire shifted into a false lumen behind the dissected calcified segment. Even after advancing a new wire into the true lumen, the stent repeatedly shifted into the false lumen. Therefore, a 2.0 mm semi-compliant long balloon was inflated in the false lumen to screen the false lumen, enabling accurate stent delivery into the true lumen.

Discussion:

The balloon screen technique offers a simple, device-free solution for challenging stent delivery in severely calcified, dissected lesions.