

## **Percutaneous Coronary Interventions over the last three decades: the adjunctive devices (role, development and perspectives)**

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Percutaneous coronary interventions (PCI) performed on large-scale basis in routine practice with documented long-term clinical benefit for the patient are balloon angioplasty introduced in 1977 and coronary stenting since 1986. Other coronary devices, so-called “adjunctive”, have triggered a great admiration at the time of its initial clinical application but showed to be less successful at the long-term follow-up. However, many adjunctive devices are still necessary in 1-2% of all PCI procedures for complex cases. This article is a short, comprehensive review retracing the conception and destiny of these devices. Coronary balloon catheters, a standard device with advance “therapeutic” features comprise: cutting, drug eluting and high pressure non-compliant balloon catheters. Atherectomy devices can be directional for lesions “debulking”, rotational (Rotablator) for calcified, long lesions and recently Orbital supposed to have less no-reflow phenomenon. Excimer Laser angioplasty for treatment of “uncrossable” lesion was claimed much in the past. Brachytherapy is used almost exclusively for in-stent restenosis. A numerous thrombectomy and embolic protection devices exist but none has shown a proven clinical benefit in randomized studies. With an advancement in medical technology adjunctive devices will play more important role in the future, especially for recanalization of chronic total occlusion and during acute myocardial infarction.

**Keywords:** percutaneous coronary interventions, stents, adjunctive devices.