

Drug-eluting balloon

Drug-eluting **balloons** (DEB) is a conventional semi-compliant **balloon angioplasty** covered with an anti-proliferative drug which is released into the vessel wall during inflation of the balloon, usually at nominal pressures with a specific minimal inflation time.

Drug-eluting **balloons** (DEBs) have been proposed as an option for the treatment of **in-stent restenosis** (ISR) following **carotid artery stent** placement. Bhatia et al. reported the experience and review of the literature to provide additional data.

For the **literature review**, a **PubMed** search was conducted to identify studies published between 2005 and 2019, reporting data on management of carotid ISR with DEBs. Two cases with carotid ISR, which were successfully treated with DEB at our facility, were also included in the final compilation of results

A total of seven studies demonstrating the use of the DEBs for treatment of carotid ISR were identified. They encompassed 31 patients, 11 (35.5%) of whom presented with symptomatic ISR, with the remaining 20 patients (64.5%) asymptomatic. DEB angioplasty followed by stent placement was performed in 3 patients, whereas DEB alone was utilized in 28 patients. Periprocedural complications included asymptomatic dissection from DEB inflation in 1 patient and transient neurological deficits in another patient. The follow-up period was variable and ranged from 1 month to 5 years. Three patients were noted to develop recurrent asymptomatic stenosis, whereas 1 patient developed an episode of symptomatic restenosis post-procedural on follow-up. In our two cases, both patients were noted to have a protracted period of hypotension postprocedure without any new or recurrent neurological symptoms.

The use of DEBs is a promising development and a viable alternative for the management of severe and recurrent carotid ISR ¹⁾.

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Bhatia K, Akhtar IN, Akinci Y, Liaqat J, Siddiq F, Gomez CR, Qureshi AI. Drug-Eluting Balloon Angioplasty for In-Stent Restenosis Following Carotid Artery Stent Placement. J Neuroimaging. 2020 Mar 30. doi: 10.1111/jon.12706. [Epub ahead of print] Review. PubMed PMID: 32227677.

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