

## Letter to the Editor

## Drug Eluting Stents - Bucking the Trend

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Since the introduction of drug eluting stents (DES) in 2001, there has been an astronomical rise in their use. Coronary artery bypass grafting (CABG) has declined in numbers. Patients who are sent to surgery now-a-days carry higher risk because they have combined valvular and ischemic disease. Most often their arteries have been subjected to repeated percutaneous coronary interventions (PCI) with DES. They may have vessels which are not suitable for PCI, such as chronic total occlusion (CTO) or diffuse atheromatous burden. In performing PCI several issues emerge which may dampen the enthusiasm that exists today.

1. Because of the relative ease of this procedure in a great majority of patients and the minimal associated patient discomfort, it may create the impression that patients do not need to change their life style or habits. Thus patients go back to smoking faster or do not make an effort to develop healthy exercise program or healthy dietary habits.

2. The second concern about DES in PCI is that the very high procedural success will lead to the policy of stenting all lesions and every subsequent lesion that may crop up. The ramification of this undertaking:

- ♦ With time there is hardly any useable segment left on the arteries for the purpose of surgical bypass should it be required; and

- ♦ There is spiraling rise in cost of treating coronary artery disease.

Therefore, it behooves us as cardiologists and members of medical society to modify our attitude on PCI and repeated catheterization. Patient should try medical treatment (including life style modification) especially in case of stable angina. They should keep in mind that PCI does not change the disease process or predilection for atheromatous plaque formation; it treats the consequence of such a process. The three year study on Ravel [Comparison of DES with bare metal stent (BMS)] has shown that both major adverse cardiac events (MACE) and target lesion revascularization

**Table 1:**  
TLR and MACE rate over time

	1 Year	3 Years
Cumulative survival rates free from TLR at	99.2%	93.7%
Cumulative survival rates free from MACE at	94.1%	83.7%

**Table 2:**  
MACE rate in multivessel stenting with DES and progression with them

Duration of Stent	MACE Rate
Composite 30 days	10.3%
6 months	22.3%

(TLR) increase with time<sup>[1]</sup> (Table 1). Lesions in Ravel were near-ideal; non-ostial, non-calcific and without thrombus. The lesion length was 10 mm. The diabetics constituted less than 20% of the treated cohort. As lesion characteristics become worse or patients with multilesions are treated by PCI, both MACE and TLR increase. In a recent study by Orlic *et al*, there was a direct relationship between MACE and TLR and the total length of stent per patient<sup>[2]</sup>. This relationship becomes evident even at six months check-up (Table 2). It is therefore clear that many patients ultimately require CABG. To ensure good outcome for bypass surgery certain length of the coronary vessel needs to be free of stents to achieve anastomosis. Finally, we should adopt a policy that sets criteria for the number of stents per patient and preferential location of these stents.

## REFERENCES:

1. Fajadet J, Morice MC, Bode C, *et al*. Maintenance of long term clinical benefit with Sirolimus-Eluting Coronary Stents - Three Year Results of the RAVEL Trial. *Circulation* 2005; 111:1040-1044.
2. Orlic D, Bonizzoni E, Stankovic G, *et al*. Treatment of Multivessel Coronary Artery Disease with Sirolimus Eluting Stent Implantation: Immediate and Mid-Term Results. *JACC* 2004; 43:1154-1160.

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