

Letter to the Editor

A Liver Transplant Patient on Everolimus Treatment Presenting with Acute Anterior Myocardial Infarction: Does the Type of Drug Eluting Stent Matter?

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To the Editor

Liver transplantation (LT) has been the most effective management strategy for end-stage liver disease and hepatocellular carcinoma. (1) Owing to the improvement of surgical techniques along with potent immunosuppressive agents and infection control, survival rates following LT reached 90% and 80% at 1 and 5 years, respectively. (1) As in the general population, cardiovascular disease (CVD) constitutes the most common cause of adverse clinical outcomes in patients undergoing LT in the long-term (2). On the other hand, primary percutaneous coronary intervention (PCI) is also the recommended therapeutic strategy for ST-elevation myocardial infarction (STEMI) in post-LT patients. (3) However, there exists no specific recommendations in the current literature regarding the type of drug-eluting stent (DES) to be particularly preferred during PCI in these patients also receiving long-term systemic immunosuppressive therapy.

A 55-year-old male patient was admitted with chest pain. Electrocardiogram (ECG) was consistent with an acute anterior STEMI. His history revealed the presence of chronic hepatitis B(+) and LT due to hepatocellular carcinoma 3 years earlier. The patient had been receiving Everolimus 0.75mg 2x1, Tenofovir 245mg 1x1, Ursodeoxycholic acid 250mg 2x2 and Esomeprazole 40mg 1x1 on a regular basis since his LT. Initial hemogram, PT-INR, liver and kidney function tests were all within normal limits. There was no contraindication to dual antiplatelet therapy (DAPT) and statins. Coronary angiography (CAG) revealed thrombosed 99% subtotal bifurcation lesion in the left anterior descending (LAD) coronary artery along with insignificant atherosclerotic plaques in other coronary arteries. The culprit lesion was successfully managed with Culotte technique using two everolimus-coated stents (3.0x38mm and 3.0x26 mm).

In the current literature, there have been only a couple of case reports describing DES implantation following acute coronary syndrome (ACS) in post-LT patients. Therefore, there are no specific recommendations regarding whether the presence and type of systemic immunosuppressive treatment in these patients might have a significant impact on the choice of DES type to be implanted in this setting (4). Echeverri et al. previously reported successful implantation of zotarolimus-coated stents in two familial hypercholesterolemia patients (due to STEMI and unstable angina pectoris (USAP)) who had already been on tacrolimus as the systemic immunosuppressive agent in the post-LT setting. (5). However, we agreed on implantation of an everolimus-coated coronary stent in our STEMI patient for whom everolimus had also been used as the systemic immunosuppressive agent since his LT potentially considering the fact that additive impact of systemic everolimus (on top of its local release by the DES in a paracrine manner) might significantly contribute to the prevention of long-term stent restenosis in this setting. In the future, many more transplant patients with successful surgical procedures and hence; with longer survival rates under immunosuppressive therapy will surely be encountered in daily cardiology practice. Therefore; there is an obvious necessity for further studies which will shed light on the issue of particular DES preferences in patients also receiving systemic immunosuppressive therapy.

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