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Introduction: Cardiac allograft vasculopathy (CAV) remains a major cause of long-term morbidity and mortality after heart transplantation (HTx). Coronary intimal thickening that occurs during the first post-HTx year is an early sign of CAV.¹ To the best of our knowledge, only one study has reported of decreased intimal thickening in HTx recipients who received prophylactic extracorporeal photopheresis (ECP) in addition to maintenance immunosuppressive therapy (IST) consisting of cyclosporine, azathioprine, and steroid.² The ECP-OCT2019 trial is designed to evaluate the effect of prophylactic ECP on intimal thickening during the first post-HTx year, as assessed by optical coherence tomography (OCT), in light of modern IST which includes mycophenolate mofetil, proven to have advantages over azathioprine in CAV prevention.

Study design: ECP-OCT2019 is a pilot, interventional, prospective, randomized, open-label study. A total of 38 patients were randomized into two arms to receive either 10 cycles of ECP treatment in addition to standard IST or standard IST alone. In all patients, coronary angiography with OCT imaging was performed within the first three months after HTx and repeated one year after HTx to detect progression of intimal thickening. The primary endpoint was defined as the change in intimal volume from baseline to one-year follow-up. Secondary endpoints included changes in maximal and mean intimal thickness, maximal and mean intimal layer area, as well as minimal and mean lumen area.

Conclusion: ECP-OCT2019 is the first prospective study to evaluate the effect of prophylactic ECP on intimal thickening in HTx recipients in the context of modern IST. Our results may influence current clinical practice in CAV prevention and diagnostics.

LITERATURE

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