Preventing Postpericardiotomy Syndrome with Colchicine: Results from the COPPS Study

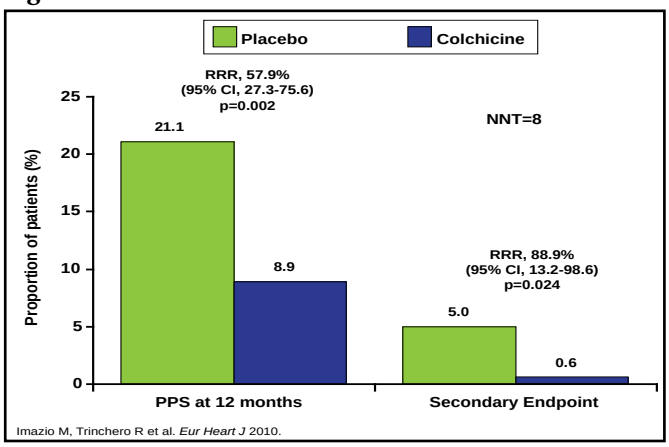
Colchicine therapy is safe and effective for the prevention of postpericardiotomy syndrome (PPS) and may decrease the risk of postsurgical PPS development by >50%. PPS, a complication that often follows cardiac surgery, occurs in 10% to 45% of patients, and though some treatment approaches, such as NSAIDs, colchicine, and corticosteroids, may be used, optimal treatment for PPS prevention has yet to be established [Finkelstein Y et al. *Herz* 2002]. Massimo Imazio, MD, Maria Vittoria Hospital, Torino, Italy, discussed results from the COlchicine for the Prevention of the Postpericardiotomy Syndrome (COPPS; NCT00128427).

COPPS was a multicenter, double-blind study that included 360 patients who were randomized to colchicine (n=180; 1.0 mg twice daily for 1 day followed by 0.5 mg twice daily for 1 month for patients ≥70 kg or 0.5 mg twice daily for 1 day followed by 0.5 mg for 1 month for patients <70 kg) or placebo (n=180) on the third postoperative day. PPS was defined as the presence of at least two of the following criteria: fever that lasted beyond the first postoperative week without evidence of systemic or focal infection, pleuritic chest pain, friction rub, pleural effusion, and new or worsening pericardial effusion. The primary efficacy endpoint was the incidence of PPS at 12 months, and the secondary endpoint was the combined rate of disease-related hospitalization, cardiac tamponade, constrictive pericarditis, and relapses. The groups were well matched at baseline.

At 12 months, there was a significant reduction in the incidence of PPS among patients who were treated with colchicine compared with placebo (RRR, 57.9%; 95% CI, 27.3 to 75.6; p=0.002; NNT=8; Figure 1). The rate of the composite secondary endpoint was also lower in the colchicine group compared with placebo (0.6% vs 5.0%, respectively; p=0.024). The adverse event profiles were similar for both groups, with no severe side effects reported across the study population. The most common side effects were gastrointestinal in nature for both groups.

This study demonstrated that colchicine halves the risk of PPS following cardiac surgery compared with placebo. This therapeutic strategy appears to be safe and effective for the prevention of postsurgical PPS. It is important to note that the diagnostic criteria for PPS were nonspecific and allowed for the detection of milder forms of pleuropericardial involvement following cardiac surgery, because at present, there are no guidelines or consensus documents on the diagnosis of PPS. Therefore, further study is warranted to determine the strength of these data.

Figure 1. COPPS Trial: Main Results.



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Further reading: Imazio M et al. *European Heart J* 2010.

DANPACE: Dual-Chamber Pacing Preferred in Sick Sinus Syndrome

Dual-chamber pacing improved long-term outcomes compared with single-chamber pacing in patients with sick sinus syndrome (SSS) in the long-term Danish Multicenter Randomized Study on AAIR Versus DDDR Pacing in Sick Sinus Syndrome (DANPACE; NCT00236158) study and should be the preferred pacing mode in these patients, according to investigators from the DANPACE study.

Bradycardia can be treated with several types of pacing, including rate-adaptive single-lead atrial pacing (AAIR), rate-adaptive ventricular (VVIR) pacing, and rate-adaptive dual-chamber pacing (DDDR). However, after VVIR pacing was shown to increase the risk of atrial fibrillation (AF) compared with physiological pacing in patients with SSS [Andersen HR, Nielsen JC, Thomsen PE et al. *Lancet*. 1997], AAIR and DDDR became the standard options for controlling bradycardia in SSS, said Jens Cosedis Nielsen, MD, PhD, Aarhus University Hospital, Skejby, Denmark. The Danish trial is the first large, multicenter, randomized trial that is designed to compare long-term outcomes that are associated with AAIR and DDDR pacing in patients with SSS.

In DANPACE, 1415 patients with SSS were randomly assigned to receive AAIR devices (n=707) or DDDR devices (n=708). The primary endpoint was all-cause mortality. Secondary endpoints included AF, stroke, heart failure hospitalization, and pacemaker reoperation.