Colchicine Averts Postpericardiotomy Syndrome

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STOCKHOLM – Daily, prophylactic treatment with colchicine for 1 month following cardiac surgery safely cut the incidence of postpericardiotomy syndrome by more than half in a placebo-controlled trial with 360 patients, the first large, controlled trial to ever assess a treatment for this common, post-surgical complication.

"Colchicine is safe and effective for the primary prevention of PPS [postpericardiotomy syndrome] and its related complications," Dr. Massimo Imazio said at the annual Congress of the European Society of Cardiology. "The main limitation of the study is the lack of standardized criteria for diagnosing PPS," which means that some patients counted as developing PPS may have had a mild form of the syndrome. Notably, the study constituted the first attempt to apply objective PPS diagnostic criteria, said Dr. Imazio, a cardiologist at Maria Vittoria Hospital in Torino, Italy.

The study employed a "simple and sound methodology," and finding that colchicine treatment prevented one episode of PPS for every eight cardiac surgery patients treated, the number needed to treat, "is very good," commented Dr. Andre Keren, professor of medicine and director of the Heart Failure and Heart Muscle Disease Center at Hadassah University Hospital in Jerusalem. The new study "was a carefully performed trial in which colchicine provided effective and safe treatment," Dr. Keren said.

Results from prior reports indicated that 10%-40% of all patients undergoing cardiac surgery developed PPS. The new findings supported that, with a PPS incidence of 21% among patients in the placebo group followed for 12 months. In addition, 85% of all PPS cases occurred during the first 30 days following surgery, a finding that prompted Dr. Imazio to recommend limiting colchicine treatment to the first postoperative month.

The Colchicine for the Prevention of the Postpericardiotomy Syndrome (COPPS) trial enrolled patients aged 18 years or older who underwent cardiac surgery. Their average age was 66, and two-thirds were men. Enrolled patients most frequently had undergone isolated coronary artery bypass grafting, in 47%, followed by isolated valve surgery, in 30%, a combined procedure, in 19%, isolated aortic surgery in 3%, and other types of surgery making up the remaining cases.

Starting on the third day after surgery, patients received either 1 mg oral colchicine b.i.d. for 1 day followed by 0.5 mg b.i.d. or placebo for 29 days. Patients weighing less than 70 kg received 0.5 mg b.i.d. on the first postoperative day followed by 0.5 mg daily for 29 days.

The researchers diagnosed PPS when patients developed at least two of the following conditions during follow-up: a fever lasting longer than the first postoperative week with no evidence of systemic or local infection, pleuritic chest pain, friction rub, pleural effusion, or new or worsening pericardial effusion.

During the first 12 months after surgery, 38 of the 180 placebo patients, 21%, developed PPS by these criteria compared with 16 patients in the colchicine arm, 9%, a statistically significant difference. Pleural effusion occurred most often, in 26% of the placebo patients and in 12% of those on colchicine, followed by new or worsening pericardial effusion, in 23% of placebo patients and 13% in the active-treatment arm.

No patient in the study developed a serious side effect. Side effects, most often gastrointestinal intolerance, occurred in 5% of placebo patients and in 9% on colchicine, a nonsignificant difference. GI intolerance is a well-established adverse effect of colchicine.

Until now, colchicine, a generic anti-inflammatory drug, has primarily been known as a treatment for gouty arthritis. The study did not receive commercial funding, but Acarpia, a Portuguese company, supplied the colchicine and placebo tablets used in the study. Dr. Imazio said that he and his associates had no disclosures. ■