A randomized trial of Colchicine for Acute Pericarditis

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Topic	Cardiology	
Citation of Paper:	A Randomized Trial of Colchicine for Acute Pericarditis N Engl J Med 2013;369:1522-8. PMID: 23992557	
Clinical Question:	Is colchicine effective in treating a first attack of acute pericarditis and in the prevention of recurrent symptoms?	
PICO	P:	18 years of age or older with a first episode of acute pericarditis (idiopathic, viral, after cardiac injury, or associated with connective-tissue disease). Acute pericarditis was diagnosed with at least two of the following criteria: (1) typical chest pain (sharp and pleuritic, improved by sitting up and leaning forward), (2) a pericardial friction rub, (3) suggestive changes on electrocardiography (widespread ST-segment elevation or PR depression), and (4) new or worsening pericardial effusion. **Exclusion criteria:** tuberculous, neoplastic, or purulent pericarditis; severe liver disease or current aminotransferase levels of more than 1.5 times the upper limit of the normal range; a serum creatinine level of more than 2.5 mg per deciliter (221 μmol per liter); skeletal myopathy or a serum creatine kinase level above the upper limit of the normal range; blood dyscrasia; inflammatory bowel disease; hypersensitivity to colchicine or other contraindication to its use
	I:	Colchicine was administered at a dose of 0.5 to 1.0 mg daily for 3 months. Dose was based on weight: 0.5mg BID if >70kg, 0.5mg ID if < 70kg All patients also received: (1) NSAIDS (ASA 800 mg TID or ibuprofen 600mg TID) for 7-10 days and tapered over 3-4 weeks **OR** (2) prednisone (0.2-0.5 mg/kg daily if NSAIDS were contraindicated) for 2 weeks with gradual tapering **AND** a PPI for gastro-intestinal prophylaxis
	C:	placebo **AND** NSAIDS (**or** prednisone) **AND** PPI
	O:	1- **Primary**: incessant (recurrence < 6 weeks after first attack) or recurrent pericarditis (after a 6-week symptom free period) 2- **Secondary**: symptom persistence at 72 hours, remission within 1 week, number of recurrences, the time to the first recurrence, disease-related hospitalization, cardiac tamponade, and constrictive pericarditis
Methods	multicenter, double-blind trial, intention-to-treat	
Results	1- Colchicine: 20 patients (16.7%) vs. Placebo: 45 patients (37.5%) (RRR in the colchicine group, 0.56; 95%CI, 0.30 to 0.72; **NNT=4**; P<0.001) 2- Colchicine reduced the rate of symptom persistence at 72 hours (19.2% vs. 40.0%, P = 0.001), the number of recurrences per patient (0.21 vs. 0.52, P = 0.001), and the hospitalization rate (5.0% vs. 14.2%, P = 0.02). 3- Colchicine also improved the remission rate at 1 week (85.0% vs. 58.3%, P<0.001). 4- No serious adverse events were observed.	
Conclusion	Colchicine in addition to conventional antiinflammatory therapy significantly reduced the rate of incessant or recurrent pericarditis, reduced the number of recurrences of pericarditis, and prolonged the time to recurrence, as compared with placebo.	
Take Home Point	Colchicine is safe and effective to use in acute pericarditis (caused by idiopathic, viral and autoimmune)	
Caveats	1- Small study with 240 patients (120 in each arm), that was however adequately powered to detect a large reduction in incessant and recurrent pericarditis 2- Although there were no differences in rates of adverse events, diarrhea was the major limiting side effect associated with colchicine and was reported in less than 10% of patients, and no serious adverse events were recorded. 3- Colchicine was not used in bacterial or neoplastic pericarditis.	