

## ANAKINRA - A PROMISING NEW THERAPY FOR IDIOPATHIC RECURRENT PERICARDITIS

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**Background.** Idiopathic recurrent pericarditis (IRP) is a debilitating condition that can be recalcitrant to conventional therapy. Some patients develop steroid dependency with the attendant risks of systemic side effects and increased future recurrence. Anakinra is a recombinant human interleukin-1 receptor antagonist that reduces systemic inflammatory responses. The aim of this study was to evaluate the therapeutic role of anakinra in IRP.

**Methods.** We retrospectively studied consenting patients with treatment refractory IRP who received anakinra, between January 2009 and November 2015. The primary end points were symptom resolution and steroid discontinuation.

**Results.** Nine patients were followed for a median of 16.8 (IQR 1.3-24) months. Study subjects were predominantly female (7 [78%]) with a median age of 53 (IQR 38 - 58) years. All 9 patients had failed maximum tolerated doses of NSAIDs, colchicine and prednisone (median dose 20 mg [IQR 15 - 22.5]). Primary symptom was chest pain in 9 (100%), with concurrent dyspnea in 5 (56%) patients. Symptom duration prior to anakinra initiation was 24 (IQR 13 - 71) months. Indication for anakinra was steroid sparing agent in 7 (78%) and symptom control in 2 (22%) patients. The dosage was 100 mg once daily via subcutaneous injection. Baseline LVEF was 62% (IQR 59% - 67%). Echocardiographic findings include pericardial effusion in 3 (33%), pericardial thickening in 6 (67%), and constrictive physiology in 4 (44%). Pericardial enhancement on cardiac MRI was seen in 7 (78%) patients. All 9 patients (100%) had symptom improvement with complete resolution in 8 (89%) and partial resolution in 1 (11%) patient. At last follow up, all 9 (100%) patients had discontinued NSAIDs and colchicine, 5 (56%) patients discontinued and 4 (44%) had reduced prednisone dosage. All patients remained on anakinra at the end of follow up. The only reported side effect was transient injection site reaction in 4 (44%) patients. In 2 (22%) patients, attempted anakinra weaning was unsuccessful due to symptomatic flare after 6 weeks.

**Conclusion.** Anakinra is an effective alternative agent for the management of steroid dependent IRP. It provides remarkable symptomatic amelioration, limits steroid dependency, and is associated with minimal side effects.