**Solving by Dissolving – Treat-to-Target Strategy and Comprehensive Gout Management Programme Improved Outcome of Patients with Tophaceous Gout**

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**Introduction**

Tophaceous gout (TG) is a severe form of gout that can give rise to disabling symptoms and irreversible joint damage. TG generally results from longstanding neglected or suboptimal management due to patient and/or physician factors. To effectively manage TG, the Division of Rheumatology of the United Christian Hospital launched a comprehensive gout management programme using the treat-to-target strategy to control gouty attacks and to resolve the formed tophi.

**Objectives**

To evaluate the outcomes of gout management programme for patients with TG.

**Methodology**

This was a retrospective review with study period from July 2011 to Jan 2015. Patients with TG requiring urate lowering therapy (ULT) were recruited into a structured gout management programme. Rheumatologist titrate ULT aiming to lower serum urate (SUA) level to < 0.3 mmol/L while rheumatology nurse provide comprehensive assessment and patient education on gout and its therapy, plus encouragement of lifestyle modifications through nurse-led clinic and phone consultations. The following parameters at beginning and end of study were recorded and reported: drug use, SUA level, patients’ report on frequency of attack and resolution of tophi.

**Result**

Thirty patients were recruited, twenty-six were male. Mean age was 64 years (27-85).
Average follow-up duration was 54.3 weeks. At study end, nearly half (14) of the patients were using single therapy of allopurinol, thirteen were receiving more than 2 types of ULT, whereas two cases used febuxostat only due to intolerance to allopurinol. Average pre-study daily dosage of allopurinol was 245 mg, while the dosage of allopurinol and febuxostat were 483 mg and 76.3 mg respectively at study end. The mean pre-recruitment SUA was 0.540 mmol/L (0.334 to 0.723 mmol/L, SD 0.157 mmol/L). At study end, mean SUA was significantly reduced to 0.347mmol/L (-0.193 mmol/L; 95% confidence interval -0.134 to -0.252; P < 0.001). Majority (77%) had reduced frequency of gouty attacks. Nearly half of the participants (47%) reported that their tophi were partially and nearly completely resolved. 15 patients (50%) were identified to have drug concordance problems, majority (97%) of patients were complying with the prescribed drug regime at study end. Conclusion Although tophaceous gout often represented long duration of suboptimal management, a dedicated treat-to-target strategy supported by comprehensive rheumatology nurse-led gout management programme can still achieve significant improvement in patient outcome. With persistent collaborative efforts by patients and care-providers, gout can be solved and tophi can be dissolved.