Repositioning sildenafil in Raynaud’s: a real-world experience

**Background/ Objective**

Recent studies of phosphodiesterase type-5 (PDE5) inhibitors have shown varied clinical benefit in patients with Raynaud’s phenomenon. This audit aimed to examine the use of the PDE5 inhibitor sildenafil following its off-patent availability and to investigate whether its repositioning in the management of patients with digital vasculopathy will maximise efficiency and reduce costs in treating digital vasculopathy.

**Method:** Patients with Raynaud’s phenomenon, critical digital ischaemia or digital ulceration were identified using medical records at Aintree University Hospital Trust. Patients who received a prescription of iloprost or sildenafil from 01/04/2012 to 31/12/2015 for the management of Raynaud’s phenomenon, critical digital ischaemia or digital ulceration were included. A sub-population was selected from these patients; those who were prescribed sildenafil between 01/10/2014 and 31/03/2015. Patients under 16 years and patients with pulmonary artery hypertension were excluded.

**Outcome measures:** 1) The number of iloprost prescriptions before and after generic availability of sildenafil and 2) the outcome of sildenafil treatment on Raynaud’s symptoms, digital ulcer healing and iloprost requirement.

**Results**: There was a 27% decrease in the number of prescriptions of iloprost when comparing the 2 years pre and post generic sildenafil adoption on the treatment pathway. A sub-population of 34 patients who received sildenafil as a new prescription between 01/10/2014 to 31/03/2015 were identified: these subjects’ clinical records were reviewed in detail to 31st Dec 2015. 68% of these patients reported that the number and duration of Raynaud’s attacks were slightly or significantly better within 8-12 weeks of commencing sildenafil. 64% of patients with digital ulcers experienced healing of their ulcers whilst taking sildenafil. Approximately 50% of patients experienced some side effects on sildenafil, with headache and dizziness most commonly reported; most of these side effects were acceptable to the patients and sildenafil was continued in the majority.

**Conclusions**: There has been a reduction in use of iloprost since sildenafil became generically available that has led to a significant cost saving. Most patients noticed improvements in Raynaud’s severity and digital ulcer healing following sildenafil use. A prospective study is recommended which uses a validated measurement instrument for digital vasculopathy severity before and after sildenafil use. A high quality study would help to set national guidelines on the use of sildenafil in digital vasculopathy.