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Can Far-infrared therapy improve pain associated with vascular access whilst on haemodialysis? A short pilot study.

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Introduction
Pain in vascular access at the time of dialysis is a concern for some patients on haemodialysis (HD) and an important clinical goal for improving quality of life. Far-infrared (FIR) therapy has been shown to reduce AVF occlusion rates, needling pain, improve vascular access blood flow, AVF diameter and primary patency. Our unit has a number of portable FIR machines for patients to use at home primarily, but we wished to assess if FIR reduced access pain whilst on HD in centre.
Methods
Using a questionnaire, we visited the notion that FIR therapy would be useful to help relieve pain whilst on HD and to see if there were any other benefits.
39 patients were identified across a main unit and 3 satellite units. They each had FIR therapy for 40 minutes during HD 3 times/wk. There were 20 males and 19 females. Access was as follows; 17 radio-cephalic AVF, 19 brachio-cephalic AVF, 1 brachio-basilic AVF and 2 Arterio-venous Grafts (AVG) the majority of the patients had an established AVF/AVG and 6 patients had a newly formed AVF. The patients were asked after a minimal 4 weeks of FIR therapy to complete a short questionnaire.

Results
Prior to the use of FIR most patients questioned reported a degree of pain was over needling sites, in the shoulder area or over the whole arm (on the AVF arm). In addition to this the pain was at various stages of treatment, during HD, post HD as well as throughout the whole HD session.
31 patients reported a reduction in the pain with the use of FIR that they had either during dialysis or cannulation of AVF.
8 patients did not have a reduction in pain but 4 of these patents did not report any pain prior to using FIR and used the FIR following infiltration or to improve AVF prior to needling.
7 patients used the FIR therapy for bruising following infiltration and they felt the bruising reduced more quickly than they thought.
4 of these patients had used the FIR at home and had found it easy to use.
1 patient did not use the FIR until he had needling problems and needed radiology intervention, but whilst waiting for the procedure found that FIR was of benefit.
3 patients had their tunnelled dialysis catheters removed as they tolerated cannulation with no concerns.
1 patient stated that they would not want to carry out any session of HD without FIR therapy.

Discussion
It is clear that the FIR therapy benefited the majority of our patients in terms of reduction of pain and in some cases allowed more tolerance during cannulation. FIR may also improve bruising from needling or infiltration and may also be useful for patients who need regular interventions and experience pain whilst waiting for treatment. FIR is a simple non-invasive treatment to improve a patient's quality of life that consumes little nursing time with no extra input or consumables.