Catheter Delivered Treatment (CDT) for Deep Vein Thrombosis. A Multi-centre Study of Current Practice

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NICE guidance recommends consideration of CDT for proximal DVT, with the aim of preventing post-thrombotic syndrome. This study aimed to review practice in CDT for DVT across the North West of England.

Retrospective case note review of all CDT for DVT between March 2012–April 2014. The following data was collected from four vascular units covering a population of 2.9 million: patient demographics, risk factors, site, interval from presentation to intervention, intervention, complications and follow up.

Of 2560 cases of DVT identified, only 15 cases underwent CDT (0.58%). Patients were mostly females (11F:4M) with median age 43 years (16–64). Twelve patients underwent catheter thrombolysis and 3 mechanical thrombectomy. Median treatment duration was 36 hours (range 1–9.6). IVC filter was deployed in 6 patients and venoplasty/stenting performed in 6. Complete lysis was achieved in 13 patients. There were two bleeding complications; one minor, one major (managed conservatively). No patients had PE. Median inpatient stay was 7 days (range 5–23) and follow up range was 6–24 months.

CDT was safe and effective though the number treated was lower than would be expected and significant variation in practice was noted between units. Vigilance should be heightened amongst admitting physicians to ensure that patients who would benefit from CDT are referred acutely to their regional vascular unit.

Keeping an Eye on the Target: Direct or Indirect Revascularisation of the Angiosome?

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It has been postulated that direct revascularisation (DR) of tributary vessels supplying a foot ulcer may have superior outcome in terms of wound healing and amputation when compared to indirect revascularisation (IR). This study aims to clarify this hypothesis in diabetic patients with Rutherford 5/6 skin changes.

A six year retrospective single-centre analysis of diabetic patients with Rutherford 5/6 distal lower limb skin changes undergoing an associated angioplasty was undertaken. All interventions were performed using a standardised technique. Healing, amputation and mortality data was recorded over 36 months. A provisional analysis was performed of 60 patients, then formalised in 72.

72 patients were included. No differences were identified between DR and IR in groups for median time to healing (152.0 days and 144.0 days respectively) (p = NS), mortality (p = NS) or amputation.

This study adds to the few published studies which assess outcomes by targeted revascularisation in diabetic patients. The authors recommend maximising blood flow through both direct and indirect revascularisation.

Combined Infra-popliteal Angioplasty has no Advantage over Direct Angiosomal Revascularisation

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Meta-analysis has shown direct (the artery leading directly to the tissue loss) angiosomal reperfusion to be superior to indirect reperfusion. Some units perform combined (direct and indirect i.e. open up as many tibial vessels as possible) reperfusion of the tibial vessels. There was inadequate data published on combined tibial angioplasty to perform meta-analysis in 2014. Our unit performs combined infra-popliteal angioplasty routinely, where possible, so the aim was to assess any advantage over traditional direct or indirect tibial angioplasty and to examine the effect of diabetes on the angiosome model.

Analysis of consecutive infra-popliteal angioplasties over a 5-year period. Kaplan Meier survival curves were used to examine differences between groups; p-values were corrected. Combined angioplasty was performed routinely wherever possible.

Two hundred and sixteen tibial angioplasties were performed. 24.5% underwent combined revascularisation, 52.3% direct and 23.1% indirect. There was a significant improvement in amputation free survival (Hazard Ratio HR = 1.652, p = 0.019) in the direct and combined groups over indirect revascularisation. However, there was no improvement in wound healing (HR = 1.163, p = 0.117). The direct vs combined comparisons showed no difference for any outcome (wound healing HR = 0.947, p = 0.849 and amputation HR = 0.971, p = 0.906). All trends were lost in diabetic patients alone (n = 149, 69% of group).

In this the largest series of combined angioplasty in the literature there was no advantage in opening up all the tibial vessels with angioplasty if the angiosome directly supplying the ischaemic tissue could be opened. The angiosome model does not appear valid, however, in diabetic patients.

The Endovascular Sealing Device in Combination with Parallel Grafts to treat Juxta- and Suprarenal Aneurysms

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The chimney technique offers an alternative to fenestrated/branched endovascular solutions for juxtarenal and suprarenal