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Digital gangrene and delayed wound healing following amputation in a diabetic foot may not be diabetes-related.

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Background: Distal digital gangrene and delayed wound healing in the foot of diabetic patients is generally attributed to diabetes and poor glycaemic control. Yet, finger ischaemia is unusual because of diabetes and an alternative diagnosis ought to be considered. We report the case of a 54 year-old woman with type 1 diabetes, who presented with recurrent digital gangrene of her foot requiring piecemeal surgery, that was slow to heal and then finger necrosis which alerted us to a possible diagnosis of connective tissue disease. **Case Report:** A 54 year-old woman presented to the diabetic foot clinic for follow up, following poor healing of amputation site of her right great and second toe. She has type 1 diabetes for 35 years and hypertension for 7 years, with peripheral neuropathy and mild background diabetic retinopathy but no nephropathy (normal renal function and albumin creatinine ratio) or macrovascular complications. Her medications included glargine, insulin lispro, aspirin, perindopril, gabapentin, citalopram and simvastatin. Her glycaemic control was sub-optimal for years (68-102mmol/mol). She was a non smoker and obese (BMI 35.2kg/m²). In addition to her poorly healing ulcers on her right foot, she had necrosis of terminal phalanx of right middle finger and nail bed of right index finger. Her history revealed that she was referred to the vascular surgeons 6 years ago from community podiatry when she developed a gangrenous right great toe for which she underwent ray amputation. This wound healed after 4 years but re-ulcerated recently. A year ago, she presented with gangrene of her right second toe that was also amputated but the wound has not yet healed. 6 months earlier, her right middle fingernail was removed secondary to infection but this has progressed to necrosis. She had no evidence of significant arterial disease in the duplex scans of her right leg and arm. Subsequently she was referred to rheumatologists on suspicion of connective tissue disease causing microvascular circulatory disturbance. She was noted to have facial telangiectasia, tight mouth and intermittent swallowing difficulties. She had negative ANCA, anti-centromere, and anti-scl-70 antibodies. She is currently receiving high dose iloprost infusion following terminalisation of her right middle finger tip. **Discussion:** Our patient has small vessel disease with sparing of medium and large vessels. She first presented with gangrene in the toes that was attributed to diabetic foot disease. Only further to finger necrosis, that connective tissue disease was suspected. She is suspected to have limited scleroderma (CREST syndrome) but does not have Raynaud's phenomenon or sclerodactyly. Iloprost infusion has been shown to improve microvasculature functioning and she has shown some improvement so far. Distal digital ischaemia is also seen in chronic renal failure and Buerger's syndrome (smokers).