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Skin blood flow in diabetic dermopathy.

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Abstract

BACKGROUND: Diabetic dermopathy has been termed the most common cutaneous finding in diabetes, occurring in as many as 40% of diabetic patients older than 50 years. Using laser Doppler technology, we tested the hypothesis that dermopathy lesions represented areas of cutaneous ischemia.

DESIGN: A survey of cutaneous blood flow in diabetic patients with dermopathy and comparison of values with those in nondiabetic patients.

SETTING: Outpatient clinic specializing in diabetes.

PATIENTS: A consecutive sample of 61 diabetic patients (52 men and 9 women; mean +/- SEM age, 58 +/- 2 years) with dermopathy had blood flow measurements performed at the sites of dermopathy and at contiguous uninvolved sites. Flow values were also determined at several reference sites and compared with those in 41 nondiabetic control subjects (30 men and 11 women; mean age, 53 +/- 3 years).

RESULTS: Heat-stimulated blood flow values at the knee, ankle, and toe were about 50% lower for the dermopathy patients than for the nondiabetic controls. Yet, despite their reduced skin blood flow reserve, the dermopathy lesions did not show relative ischemia. At the basal temperature of 35 degrees C, flow was 1.1 +/- 0.1 mL /min per 100 g of tissue in apparently normal skin vs 2.2 +/- 0.2 at dermopathy sites; at 44 degrees C, flow at the normal sites was 7.9 +/- 0.3 mL /min per 100 g of tissue vs 12.9 +/- 0.6 at dermopathy sites (P<.01 for both comparisons).

CONCLUSIONS: Although patients with diabetic dermopathy exhibited reduced skin blood flow compared with nondiabetic volunteers, flow levels were considerably higher at the dermopathy sites than at contiguous uninvolved skin sites. These results refute the hypothesis that diabetic dermopathy represents local ischemia. However, it is still possible that the scarring represented by dermopathy lesions is related to decreased skin perfusion due to diabetes.

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