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Risk factors associated with complications in lower-extremity reconstruction with the distally based sural flap: A systematic review and pooled analysis



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Summary The distally based sural fasciocutaneous flap is one of the few options available for local flap reconstruction of soft-tissue defects in the lower one-third of the leg. Few studies have assessed risk factors associated with poor outcomes in this flap. A literature search was performed of MEDLINE, EMBASE, CINAHL and the Cochrane Library for articles evaluating the use of sural artery fasciocutaneous flaps for soft-tissue reconstruction of the leg. Data were pooled and a univariate analysis was performed to identify characteristics associated with increased morbidity. A logistic regression model was created, and odds ratios and p values associated with the development of complications were calculated. Sixty-one papers were identified which included data on 907 patients. The majority of sural flaps were used to cover defects of the heel (28.2%), foot (14.4%) or ankle (25.8%). Trauma was the most common indication, followed by ulcers and open fractures. Flap complications were recorded in 26.4% of cases with a flap loss rate of 3.2%. With multivariate analysis, venous insufficiency and increasing age were independent risk factors for complications. Patients with venous

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