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Review

Functional Outcomes following Revascularisation for Critical Limb Ischaemia CME

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ABSTRACT

Objectives: More traditional outcome measures following lower limb bypass procedures are poor predictors of functional outcome. This paper aimed to review the effect of infrainguinal bypass surgery on residential and mobility status in patients with critical limb ischaemia.
Design: Review.
Methods: A Medline search up until April 2011 was undertaken of all studies involving patients with CLI undergoing ILLB and PTA. Studies were reviewed if they addressed the ambulatory/residential status of the patients pre- and post-operatively. Ambulatory status was defined as the ability to walk even with the help of a stick/frames. Independent residential status was defined as living at home with no help.
Results: A total of 10 studies on IILB were deemed suitable for inclusion in the review, reporting 3381 patients (2064 men). Median age ranged from 66 years to 84 years. Thirty day mortality ranged from 0% to 6.3%. Follow-up ranged from 30 days to 1 year. Three studies noted an improvement in ambulation status. No study reported any improvement in residential status after ILLB. Only one study reported on specific improvements in ambulatory status in patients with CLI after PTA.
Conclusions: ILLB for patients with CLI is not without risk. Patients are not as independent or mobile following surgery. Further studies need to firstly identify the cause(s) of this and to determine optimal methods to return more patients to independence. Furthermore, CLI studies need to routinely report data on functionality.

Introduction

Critical limb ischaemia (CLI) is a limb threatening condition whose prevalence has been estimated at 20 000 cases per year with an annual incidence of 40 per 100 000 population.[1] The diabetic epidemic and increasing age of the population mean that these numbers are bound to increase and as such present society with a likely increased social and financial burden. Over recent years there has been a significant increase in the use of aggressive endovascular techniques to treat patients with critical limb ischaemia with variable results.[2,3] However, the role of traditional lower limb bypass still remains the gold standard and has been shown to benefit patients in the longer term.[4] For decades, surgeons and interventionalists have been fixated with outcomes such as patency rates. Such outcomes have, however, been found to be a poor predictor of functional outcomes and patients are more likely to be concerned as to whether they are alive, pain free, with all ulcers healed and have a functional leg which allows them to continue walking and maintain independent living. These outcome measures are becoming increasingly reported and this review aims to summarise relevant studies to assess the effect of lower limb surgical revascularization and percutaneous transluminal angioplasty (PTA) in patients with critical limb ischaemia on such functional outcomes.

Methods and Materials

Two electronic searches were undertaken using PUBMED to search the MEDLINE database from January 1970 to April 2011. Search one employed the terms “critical limb ischaemia” (CLI) and “lower limb bypass” which was combined with each of the following terms “ambulatory status”, “walking ability”, “residential status”, “living status” and “functional outcome”. Search two employed the terms “critical limb ischaemia” and “lower limb AND angioplasty” again combined with each of the following terms “ambulatory status”, “walking ability”, “residential status”, “living status” and “functional outcome”. Abstracts of the citations identified by the search were then scrutinized by the both authors to determine eligibility for inclusion in the analysis (Fig. 1a & b).

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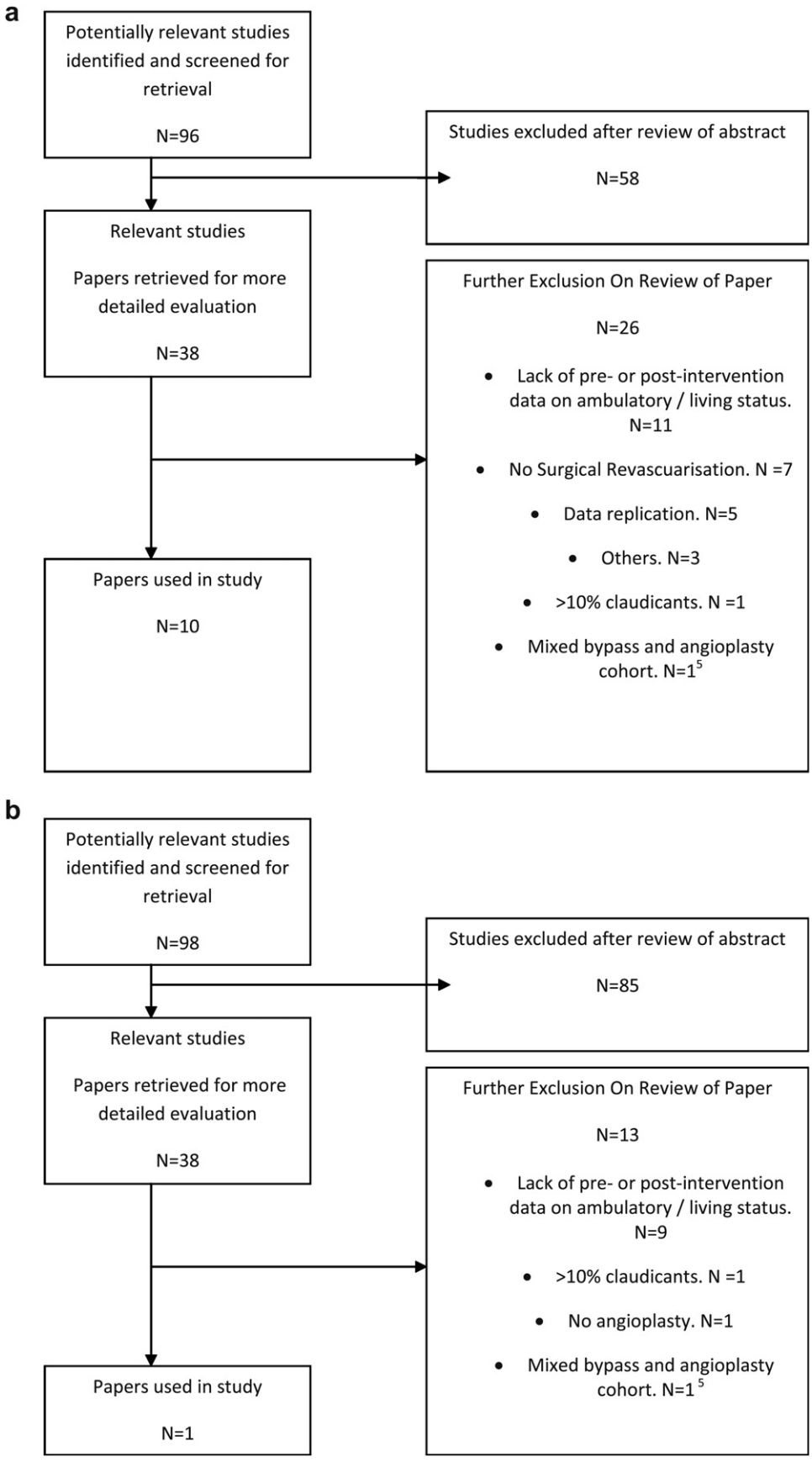

Figure 1. Flow charts illustrating the process of inclusion and exclusion of studies in the review for (a) lower limb infrainguinal bypass and (b) infrainguinal percutaneous transluminal angioplasty.