



The graphic features the SecurAcath logo at the top center. Below it, the text 'Reduce Infections' and 'Decrease Dislodgements' is displayed in large white font. A 'Learn More' link with a right-pointing arrow is positioned below the text. On the right side, there is a detailed illustration of the SecurAcath device, which is a yellow and orange cannulation tool with 'LIFT' and 'HOLD' labels on its handles and 'SecurAcath' branding on the main body. The background is a gradient of orange and brown, with a stylized illustration of a blood vessel being cannulated.



To study the effect of cannulation time on arteriovenous fistula (AVF) survival” Wilmink et al (2017).

Abstract:

BACKGROUND: To study the effect of cannulation time on arteriovenous fistula (AVF) survival.

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METHODS: Analysis of two prospective databases of access operations and dialysis sessions

from 12 January 2002 through 4 January 2015 with follow-up until 4 January 2016. First cannulation time (FCT), defined from operation to first cannulation, was categorized as <2 weeks, 2-4 weeks, 4-8 weeks, 8-16 weeks and ≥ 16 weeks. Early cannulation was defined as FCT within 4 weeks. AVF survival was defined as the date until the AVF was abandoned. Maximum machine blood flow rate (BFR) for the first 29 dialysis sessions on AVF was analysed.

RESULTS: Altogether, 1167 AVF with functional dialysis use were analysed: 667 (57%) radial cephalic AVF, 383 (33%) brachiocephalic AVF and 117 (10%) brachiobasilic AVF. The 631 (54%) AVF created in on-dialysis patients were analysed separately from 536 (46%) AVF created in pre-dialysis patients. AVF survival was similar between cannulation categories for both pre-dialysis patients ($P = 0.19$) and on-dialysis patients ($P = 0.83$). Early cannulation was associated with similar AVF survival in both pre-dialysis patients ($P = 0.82$) and on-dialysis patients ($P = 0.17$). Six consecutive successful cannulations from the start were associated with improved AVF survival ($P = 0.0002$). A below-median BFR at the start of dialysis was associated with better AVF survival ($P < 0.0001$). A below-median increase in BFR in the first 2 months was associated with worse AVF survival ($P = 0.007$). The type of AVF, diabetes, pre-dialysis state at operation and six successful cannulations from the start were independent predictors for AVF survival.

CONCLUSIONS: FCT is not associated with AVF survival. Failures to achieve six successful cannulations from the start of dialysis and higher machine BFR in the first week of dialysis are associated with decreased AVF survival.

Reference:

Wilmink, T., Powers, S., Hollingworth, L. and Stevenson, T. (2017) Effect of first cannulation time and dialysis machine blood flows on survival of arteriovenous fistulas. *Nephrology, Dialysis, Transplantation*. October 16th. .

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