

Is It Possible to Create a “Mechanical” Arteriovenous Fistula in Hemodialysis Patients?

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Abstract: Manual suturing still remains the best technique for the creation of vascular anastomoses on uremic patients with excellent results, despite being time consuming, difficult to perform with small vessels, and associated with a significant learning curve. We created a full mechanical arteriovenous fistula on a 65-year-old uremic patient with a new device already used in cardiac bypass surgery. The fistula was created automatically and rapidly, without the need for temporary occlusion of the artery, reducing the risk of blood clotting. We believe that mechanical devices may be useful to produce precise and fast anastomoses requiring minimal training for the surgeon.