

Progress in Artificial Venous Valves: How Close Are We to Clinical Application?

NOTES

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At present, there are no widely accepted surgical or percutaneous treatment options for deep chronic venous insufficiency. The small intestinal submucosa square stent bicuspid venous valve (BVV) has shown promising results. In experimental long-term studies in sheep jugular veins, 88% of implanted valves exhibited good function, whereas 12% had decreased function owing to valve tilting, of which only 4% had partial thrombosis. BVVs were also placed in three patients and have remained patent without thrombosis or other complications since 2002. At present, 3 years after the BVVs placement, symptoms in two patients are decreased. Proper sizing and proper placement of the valves was critical to their function. To eliminate occasional tilting of the original BVV a second generation BVV has been developed and tested. At the time of this writing, a modified SG BVV has been in clinical trials outside the United States.

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