

In Vitro Evaluation of an Artificial Venous Valve

Authors : Joon Hock Yeo, Munirah Ismail

Abstract : Chronic venous insufficiency is a condition where the venous wall or venous valves fail to operate properly. As such, it is difficult for the blood to return from the lower extremities back to the heart. Chronic venous insufficiency affects many people worldwide. In last decade, there have been many new and innovative designs of prosthetic venous valves to replace the malfunction native venous valves. However, thus far, to the authors' knowledge, there is no successful prosthetic venous valve. In this project, we have developed a venous valve which could operate under low pressure. While further testing is warranted, this unique valve could potentially alleviate problems associated with chronic venous insufficiency.

Keywords : prosthetic venous valve, bi-leaflet valve, chronic venous insufficiency, valve hemodynamics

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