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# Glutaraldehyde-treated homologous vein graft as a vein substitute: Experimental study in rabbits

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Vein graft reconstruction may prevent sequelae of venous interruption or lesion. Our aim was to study glutaraldehyde-treated homologous vein grafts as vein substitute. Sixty rabbits were divided into 2 groups: autologous vein graft (AG), and glutaraldehyde-treated homologous vein graft (HG). Each group was subdivided into 3 subgroups (n=10) and studied at 24 hours, 14 days, and 28 days. Veins were treated in glutaraldehyde and kept at $4^{0}$ C with antibiotics. Grafts were implanted into the vena cava. Veins were analyzed macroscopically and by light/scanning electron microscopy. Fibrosis was seen around the grafts at 14 and 28 days. Cavography showed 4 partial thrombi in AG, 3 in HG, and 4 occlusive thombi in HG. Macroscopic examination did not show any thrombus in AG. In HG, 2 partial thrombi were confirmed at 24 hours and 3 occlusive thrombi at 14 days. There was no statistical difference in relation to patency between the two groups. Histological sections (at 14 and 28 days) showed hyperplasia of similar intensity and variable distribution in both groups. Electron microscopy (at 24 hours) revealed absence of the endothelium on the graft surface, presence of inflammatory cells and mural thrombi in AG and HG. Both groups at 14 and 28 days showed endothelial cells covering the lesion area on the graft surface (larger in AG than HG). Both grafts behaved similarly in relation to patency and morphological characteristics. Glutaraldehyde-treated graft may thus be a promising alternative for vein reconstruction for use in human surgery.

## Biography

Regina Moura has completed her MD 25 years ago from São Paulo State University and doctoral studies from the same institution in the year of 2000. She is Vascular Surgeon and Professor at the Faculty of Medicine of Botucatu- São Paulo State University - UNESP, Brazil. UNESP is one of the largest most important universities in Brazil. In this institution, she develops research projects related to vascular surgery, besides her teaching and assistance duties. She has published around 25 papers in reputed journals and served as reviewer/editorial board member of reputed scientific journals.

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