**A remark on usability of GSV from varicose vein patients as bypass graft**

**Although internal thoracic arteries are preferred for coronary artery revascularizations, the GSV continues to be the most favorable graft for peripheral arterial reconstructions. Nevertheless, there is no consensus of opinion whether the GSVs from varicose vein patients are suitable for bypass grafting. The search in the literature revealed that satisfactory results were achieved using these grafts in reconstructive peripheral and coronary artery surgery. In some studies, the grafts were wrapped locally (around the dilated sites) or totally with mesh grafts or polytetrafluorethylen (PTFE) prostheses to reinforce the veins. Neufang et al. [1] reported on 35 infra-inguinal bypass operations performed with GSVs exhibiting segmental varicose dilatations that were reinforced with PTFE and followed up by duplex scanning for 48 months. The primary, primary assisted, and secondary patency rates were 66%, 82%, and 82%, respectively. Duplex scan failed to demonstrate stenosis of the reinforced venous segments or aneurismal degeneration of the residual venous segments. Melliere et al [2] reported on several varicose patients whose saphenous veins had 1 to 3 local dilatations that were wrapped with PTFE. No complications due to the wrapping occurred, and the unwrapped segments did not dilate during the 3-year follow-up. Soury et al. [3] published 4 cases of prosthetic reinforcement of highly dilated saphenous vein allowing successful femoral-popliteal bypass grafting. No thrombosis or any other complications were observed after a mean follow-up of 41 months. Moritz et al. [4, 5] used 11 GSVs with mean diameter 13,3 +- 3 mm obtained after stripping operations and inserted into Dacron mesh tubes of 6 mm internal diameter for infra-inguinal arterial reconstructions; 6 other patients underwent coronary artery bypass grafting. All externally supported venous segments showed satisfactory size reduction without stenosis of folds. One graft occluded, 2 patients with peripheral reconstructions underwent reoperations but the other grafts were patent after a mean of 17 months (range 6 to 42 months). Zurbrugg et all. [6] summarized the 3-year patency rate in 53 patients and the survival rate of 200 patients having undergone aorto-coronary bypasses with bio-compound grafts. These grafts were formed by using an ultra-flexible metal mesh tube that was placed intra-operatively outside the harvested veins of varicose patients and the two pieces were joined together with fibrin glue. The 30-day mortality rate was 3.5%; the patency rate of the native veins was 68.7%, and that of compound grafts 68.3% at 3 years. The authors stated that the bio-compound technique was a reliable method to achieve complete myocardial revascularization.**

**During my professional activity as vascular and coronary artery surgeon (I am retired for many years) I used occasionally GSVs from varicose vein patients for peripheral as well as coronary artery reconstructions with satisfactory results (unpublished data). There are presumably other surgeons who used saphenous veins of varicose patients for arterial reconstructions but did not publish their experience. GSVs in varicose vein patients are incompetent but not afflicted by total length varicose degeneration, as documented on the attached picture. Retrograde phlebography was performed a few years after crossectomy. GSV trunk in the thigh remained patent and incompetent; it does not show any varicose dilatation and would be applicable to bypass grafting. C. Recek**

**References**

**1)      Neufang A, Dorweiler B, Espinola-Klein C, et al. External reinforcement of varicose veins with PTFE prosthesis in infra-inguinal bypass surgery – clinical results. Thorax Cardiovasc Surg 2003;51;63-6.**

**2)      Melliere D, Le Chevallier B, Kovarsky S. Wrapped autologous greater saphenous vein bypass for severe limb ischemia in patients with varicose veins. Preliminary report. J Cardiovasc Surg (Torino) 1995;36;117-20.**

**3)      Soury P, Peillon C, Watelet J, et al. Prosthetic reinforcement of varicose saphenous vein grafts for infra-inguinal bypass. Ann Vasc Surg 1999;13:290-3.**

**4)      Moritz A, Grabenwoger R, Raderer F, et al. Mesh tube-constricted varicose veins used as bypass grafts for infra-inguinal arterial reconstructions. Arch Surg 1992;127:416-20.**

**5)      Moritz A, Grabenwoger F, Wolner E. Mesh tube-calibrated varicose veins for coronary artery bypass grafting. Ann Thorac Surg 1994;57:240-2.**

**6)      Zurbrugg HR, Knollmann F, Musci M, et al. The bio-compound method in coronary artery bypass operations: Surgical technique and 3-year patency. Ann Thorac Surg 2000;70:1536-40**

**Passariello F, Zamboni P (Eds). CHIVALAB. The CHIVA Laboratory. CHIVA 20 years later.Held on the Internet from midnight GMT of November 19th, 2007 to midnight GMT of December 1st, 2007. The Chivalab Archive is available at the address** [**http://web.tiscali.it/afunc/chivalab/chivalab.htm**](http://web.tiscali.it/afunc/chivalab/chivalab.htm)**. Accessed on line on Mar 7th, 2015.**

**D. SicardLettre a C. FranceschiNov 19th, 2007Answer to C. Franceschi French**

[**http://web.tiscali.it/vasculab/cpanel/discussions/lettre\_du\_president\_CNE\_D\_Sicard.jpg**](http://web.tiscali.it/vasculab/cpanel/discussions/lettre_du_president_CNE_D_Sicard.jpg)

**C. Franceschi Letter to the Ethical Committee Nov 16th, 2007Private Letter to the President of the French Ethical Committee**

**Frenchhttp://**[**web.tiscali.it/vasculab/cpanel/discussions/lettre\_a\_Didier\_Sicard.doc**](http://web.tiscali.it/vasculab/cpanel/discussions/lettre_a_Didier_Sicard.doc)

**C. Franceschi LettreMay 05th, 2007Private Letter to Several InstitutionsFrenchhttp://**[**web.tiscali.it/vasculab/cpanel/discussions/lettre\_Franceschi.doc**](http://web.tiscali.it/vasculab/cpanel/discussions/lettre_Franceschi.doc)

**Zamboni P, Marcellino MG, Cappelli M, Feo CV, Bresadola V, Vasquez G, Liboni A.Saphenous vein sparing surgery: principles, techniques and results.J Cardiovasc Surg (Torino). 1998 Apr;39(2):151-62.Abstract. Institute of General Surgery and Vascular Laboratory, University of Ferrara, Italy.[http://web.tiscali.it/vasculab/cpanel/discussions/Zamboni\_1998.pdf](http://web.tiscali.it/vasculab/cpanel/discussions/Zamboni_1998.pdf%22%20%5Ct%20%22_blank)**

**SENTOU Y.Comment evaluer le capital veineux avant chirurgie arterielle - How to evaluate venous resources prior to arterial surgery**

**Phlebologie N.3, 1998, vol. 51, no 3, pp. 260-362 (27 ref.), pp. 277-280La saphene, greffon potentiel - The saphenous, potential graft. Reunion commune franco-suisse de Crans-Montana, Suisse (22/01/1998)**

**Frenchhttp://**[**web.tiscali.it/vasculab/cpanel/discussions/Comment**](http://web.tiscali.it/vasculab/cpanel/discussions/Comment) **evaluer le capital veineux Phlebologie 1998.doc**

**KNIEMEYER H. W., RIS H. B., HAKKI H., REBER P. U.Exigences pour les greffes veineuses destinees a la chirurgie des arteres peripheriques - Requirements for venous grafts destined for peripheral arterial surgeryPhlebologie N.3, 1998, vol. 51, no 3, pp. 260-362 (27 ref.), pp. 289-293**

**La saphene, greffon potentiel - The saphenous, potential graft. Reunion commune franco-suisse de Crans-Montana, Suisse (22/01/1998)**

**Frenchhttp://**[**web.tiscali.it/vasculab/cpanel/discussions/Exigences**](http://web.tiscali.it/vasculab/cpanel/discussions/Exigences) **pour les greffes veineuses Phlebologie 1998.doc**

**Zamboni P, Marcellino MG, Feo CV, Pisano L, Vasquez G, Bertasi M, Liboni A.Alternative saphenous vein sparing surgery for future grafting.**

**Panminerva Med. 1995 Dec;37(4):190-7.Abstract. Department of General Surgery, University of Ferrara, Italy.[http://web.tiscali.it/vasculab/cpanel/discussions/Zamboni\_1995.pdf](http://web.tiscali.it/vasculab/cpanel/discussions/Zamboni_1995.pdf%22%20%5Ct%20%22_blank)**

**Paul Pupplink :Maladie Variqueuse et pontage arteriel: 2 imperatifs a concilier.Le Journal Faxe de Pathologie Vasculaire. 10 novembre 1995**

**Frenchhttp://**[**web.tiscali.it/vasculab/cpanel/discussions/pupplink.jpg**](http://web.tiscali.it/vasculab/cpanel/discussions/pupplink.jpg)

**Pierre BoivinPreservation du capital veineux.Le Journal Faxe de Pathologie Vasculaire. 13 octobre 1995 Frenchhttp://**[**web.tiscali.it/vasculab/cpanel/discussions/boivin.jpg**](http://web.tiscali.it/vasculab/cpanel/discussions/boivin.jpg)

**Melliere D.Why and when to preserve the saphenous veins of varicose patients to serve as an arterial bypass?J Mal Vasc. 1994;19(3):216-21.**

**Abstract. Service de Chirurgie Vasculaire, CHU Henri-Mondor, Creteil.Englishhttp://**[**web.tiscali.it/vasculab/cpanel/discussions/charte\_1994.pdf**](http://web.tiscali.it/vasculab/cpanel/discussions/charte_1994.pdf)

**Melliere D, Cales B, Martin-Jonathan C, Schadeck M.Necessity of reconciling the objectives of the treatment of varices and arterial surgery. Practical consequences]J Mal Vasc. 1991;16(2):171-8.Abstract. Service de Chirurgie Vasculaire, CHU Henri-Mondor, Creteil.**

**Englishhttp://**[**web.tiscali.it/vasculab/cpanel/discussions/Melliere\_1991.pdf**](http://web.tiscali.it/vasculab/cpanel/discussions/Melliere_1991.pdf)

**Hammarsten J, Pedersen P, Cederlund CG, Campanello M.Long saphenous vein saving surgery for varicose veins. A long-term follow-up.**

**Eur J Vasc Surg. 1990 Aug;4(4):361-4.Abstract. Department of Surgery and Radiology, Hospital of Varberg, Sweden.**

**Englishhttp://**[**web.tiscali.it/vasculab/cpanel/discussions/Hammarsten\_1990.pdf**](http://web.tiscali.it/vasculab/cpanel/discussions/Hammarsten_1990.pdf)

**ROYLE, JP., SOMSEN, GM.: Preservation of the long saphenous vein. J Cardiovasc Surg (Torino) 1991: (32**