

RECENT ADVANCES IN THE MANAGEMENT OF PRIMARY VARICOSE VEINS

Essay

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العليم

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List of Abbreviations

Abb.	Full term
AAGSV	Anterior accessory great saphenous vein
AASV	Anterior accessory saphenous vein
ASVAL.....	Ambulatory varices ablation under local anaesthesia
AV	Arterio-venous
AVL.....	Anterior vein of the leg
AVP	Posterior arch vein
CAC.....	Cyanoacrylate closure
CAG.....	Cyanoacrylate glue
CE.....	Cranial extension
CEAP.....	Clinical, Etiological, Anatomical and Pathological classification
CFV	Common femoral vein
CHIVA.....	Cure conservatrice et hemodynamique de l'insuffisance veineuse en ambulatoire (French acronym)
CT	Computed tomography
CTV	Computed tomography venography
CVD.....	Chronic venous disorders
CVI	Chronic venous insufficiency
DE.....	Dorsal extension
DSS.....	Double syringe system
DVT	Deep venous thrombosis
ECM	Extracellular matrix
EHIT	Endovenous heat induced thrombus

List of Abbreviations (Cont.)

Abb.	Full term
EPA.....	External pudendal artery
EVLA.....	Endovenous laser ablation
EVSA.....	Endovenous steam ablation
FS.....	Foam sclerotherapy
FV	Femoral vein
GAG	Glycosaminoglycan
GSV	Great saphenous vein
HHD	Hand held Doppler
HL/S.....	High ligation and stripping
IG	Intergemellar
IPC	Intermittent pneumatic compression
IPL	Intense pulse light
IUP	International union of phlebology
IVC	Inferior vena cava
IVUS.....	Intravascular ultrasound
KTS.....	Klippel Trenaunay syndrome
LPT	Lower paratibial
MF	Muscular fascia
MG.....	Medial gastrocnemial
MMPs	Matrix Metalloproteinases
MOCA	Mechanochemical ablation
MRV	Magnetic resonance venography
NTNT	Non-thermal non-tumescent

List of Abbreviations (Cont.)

Abb.	Full term
PA	Para achilean
PAGSV	Posterior accessory great saphenous vein
PAV	Posterior arch vein
PE	Pulmonary embolism
PEP	Post exercise pressure
PF.....	Popliteal fossa
PIN.....	Perforation invagination stripping
PLT	Posterior lateral thigh
PPG.....	Photoplethysmography
PT	Posterior tibial
PV	Popliteal vein
PVs	Perforator veins
RBCs.....	Red blood cells
RFA	Radiofrequency ablation
RFITT	Radiofrequency induced thermotherapy
SEPS	Subfascial endoscopic perforator surgery
SF.....	Saphenofemoral
SFJ	Saphenofemoral junction
SMC.....	Smooth muscle cell
SP.....	saphenopopliteal
SPJ	Saphenopopliteal junction
SSV	Small saphenous vein
STD.....	Sodium tetradecyl sulfate

List of Abbreviations (Cont.)

Abb.	Full term
SVT.....	Superficial vein thrombosis
TA.....	Tumescent anesthesia
TIA.....	Transient ischemic attacks
TIMPs	Tissue inhibitor of metalloproteinase
TIPP	Transilluminated powered phlebectomy
TV.....	Terminal valve
UGS	Ultrasound guided sclerotherapy
US	Ultrasound
US-FDA.....	US-Food and Drug administration
USFS.....	Ultrasound guided foam sclerotherapy
USGFS.....	Ultrasound guided foam sclerotherapy
VBOD.....	V-Block occlusive system
VCSS	Venous clinical severity score
VHL.....	Von Hippel Lindau gene
VVs.....	Varicose veins

INTRODUCTION

Varicose veins are tortuous, widened veins in the subcutaneous tissues of the legs and are often easily visible (*Campbell, 2006*).

Varicose veins of the legs affect approximately 25% of the population and may have a substantial impact on patient's health-related quality of life (*Biemans et al., 2013*).

The word 'varicose' is derived from the Latin word 'varix' which means twisted. The etiology and pathogenesis of primary varicose veins remain unclear. Valvular incompetence causing venous reflux is frequently observed and has long been postulated as the primary cause of vein wall weakness and dilatation (*Lim and Davies, 2009*).

Although varicose veins have traditionally been regarded as simply a cosmetic problem more commonly they produce symptoms of heaviness fatigue, pain, swelling, restlessness, burning and pruritus which interfere with activities of daily living and result in lost time from work (*Nael and Rothbun, 2009*).

About 10% of people with varicose veins go on to develop skin changes such as pigmentation or eczema, while about 3% may develop venous ulcers (*Marsden et al., 2013*).

Duplex scanning is recommended as the first diagnostic test for all patients with varicose veins. It is safe, noninvasive, cost-effective and reliable (*Gloviczki et al., 2011*).

Although varicose veins are common many remain asymptomatic and only a minority present for treatment (*Beale and Gough, 2005*).

In addition to improving cosmetic appearance, current treatments for varicose veins are aimed at reducing venous hypertension and the resultant chronic inflammation that leads to ulceration (*Rathbun and Kirkpatrick, 2007*).

Treatment options include conservative measures (lifestyle modification, medications and compression therapy), and if these are unsuccessful surgical and, more recently endovascular procedures, in which the vein is removed, ligated or sclerosed. These treatments may be used alone or in combination to improve the appearance and the lifestyle-limiting manifestations of varicose veins (*Bartholomew et al., 2005*).