COMPARATIVE STUDY BETWEEN GREAT SAPHENOUS VEIN STRIPPING AND MODIFIED HAEMODYNAMIC CORRECTION (CHIVA) AS A SURGICAL TREATMENT FOR VARICOSE VEINS RELATED TO GREAT SAPHENOUS VENOUS SYSTEM

THESIS OF

Mahmoud Badawi Moawad

(M.B.B.Ch, MSc. General Surgery)

A thesis submitted for partial fulfillment of The requirements for the doctorate degree In

General Surgery

DEPARTMENT OF SURGERY

FACULTY OF MEDECINE

FAYOUM UNIVERSITY

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ABSTRACT

Background: The CHIVA*(Cure Conservatrice et de l'Hémodynamique insuffisance Véneuse en ambulatoire*)technique has appeared at the decade of eighties of the last century. It has been identified to be an attractive method for the treatment of lower limb varicosities, in spite of the little number of surgeons skilled at this procedure at its beginning. The CHIVA has been continuing to be more effective although the huge revolution of the more recent modalities for the treatment of varicosities. This relatively new procedure depends in its management of varicose veins on the reversion of the venous blood flow to its normal haemodynamic state at both deep and superficial systemsvia breaking all types of reflux at the escape points within the different compartments.

Subjects and Methodology: This study has been carried out at the general surgery department in Fayoum University Hospital (FUH) in the period from May 2015 to January 2017 and included 60 patients from those attended the outpatient departments of general surgery complaining from CDV or varicose veins were randomly arranged into 2 groups 30 cases group; group I (CHIVA) and group II (HLS). They were assessed according to theCEAP clinical classification and ultrasonic duplex scanning. CHIVA operation was performed under local anesthesia while the stripping under spinal or general anesthesia.Cases were reviewed regularly at the outpatient clinic for 12 months to assess recurrence rates and complications at both groups; data were recorded and statistically analyzed.

Results: The recurrence occurredat 5 of 30 and 0 of 30 at CHIVA and stripping respectively. Regarding the aesthetic satisfaction of the patient, the stripping was better; 27/30 in contrast to 21/30, while the investigator satisfaction was more or less equal; 22/30 for stripping and 23/30 for CHIVA. The wound infection was 1/30 in each group. Nerve damage,

bruises and superficial venous thrombosis were found to be 0 of 30, 8 of 30 and 0 of 30 in CHIVA group,while at the stripping group were 3 of 30, 16 of 30 and 1 of 30 respectively.

Conclusions: It is suggested forthe CHIVA method to be more efficient if it was followed up on longer time scale; at least 60-120 months. Proper surgical techniques in the form of using non-absorbable ligatures with removal of venous segments 1-4 cm as well could lead to more satisfying results. Additionally, the bigger samples size could add to the reliability of conclusions of such comparative studies.

Key Words: Varicose veins surgery, CHIVA, Venous stripping.

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LIST OF ABBREVIATIONS

AAGSV Anterior Accessory Great Saphenous Vein

AASVAnterior Accessory Saphenous Vein

AC Anatomical Compartment

ASVAL Ambulatory Selective Varices Ablation under Local Anaesthesia

CEAPClinical, Etiological, Anatomic, and Pathological

CFV Common Femoral Vein

CFA Common Femoral Artery

CHIVA Cure Conservatrice et de l'Hémodynamique insuffisance Véneuse en ambulatoire

CIA Common Iliac Artery

CIV Common Iliac Vein

CVD Chronic Venous Disease

CVI Chronic Venous Insufficiency

CS Closed Shunt

DFHSP Dynamic Fractionation of Hydrostatic Pressure

DOI Digital Object Identifier

DOS Derived Open Shunt or Open Derived Shunt (ODS)

DUSDuplex Ultrasound

DVT Deep Vein Thrombosis

EIV External Iliac Vein

EIA External Iliac Artery

EVLT Endovenous Laser Ablation

EVLT Endovenous Laser Therapy

GSV Great Saphenous Vein

HHDHand-Held Doppler

HLS High Ligation and Stripping

HRQOL Health-Related Quality Of Life

IIA Internal Iliac Artery

IIV Internal Iliac Vein

IPVsIncompetent Perforating Veins

LSV Long Saphenous Vein

OV Obturator vein

OS Open Shunt

PEP Pelvic Escape Points

PRO Patient-Reported Outcome

PV Perforating Vein

QoL Quality of Life

RCT Randomized Controlled Studies

RFA Radio Frequency Ablation

rVCSSrevised Venous Clinical Severity Score

SF Shunt Flow

SFJ Saphenofemoral Junction

SPJ Saphenopopliteal Junction

SSVSmall Saphenous Veins

SVI Superficial Venous Insufficiency

UGFS Ultrasound-Guided Foam Sclerotherapy

UIP Union of Phlebology

VCSSVenous Clinical Severity Score

VMP Valvulo-Muscular Pump

VSS Venous Severity Scoring