MANAGEMENT OF VENOUS ULCER

Essay

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Master Degree

In

General Surgery

Submitted By

Abd-El Moneam Ahmed Mohamed

M. B., B. Ch.

Supervised by

*

Prof. Dr. Nabil Amin El Mehairy

Prof. of General Surgery

Faculty of Medicine

Ain Shams University

*

Dr. M. Maged El Deeb

Lecturer of General Surgery

Faculty of Medicine

Ain Shams University

Faculty of Medicine

Ain Shams University

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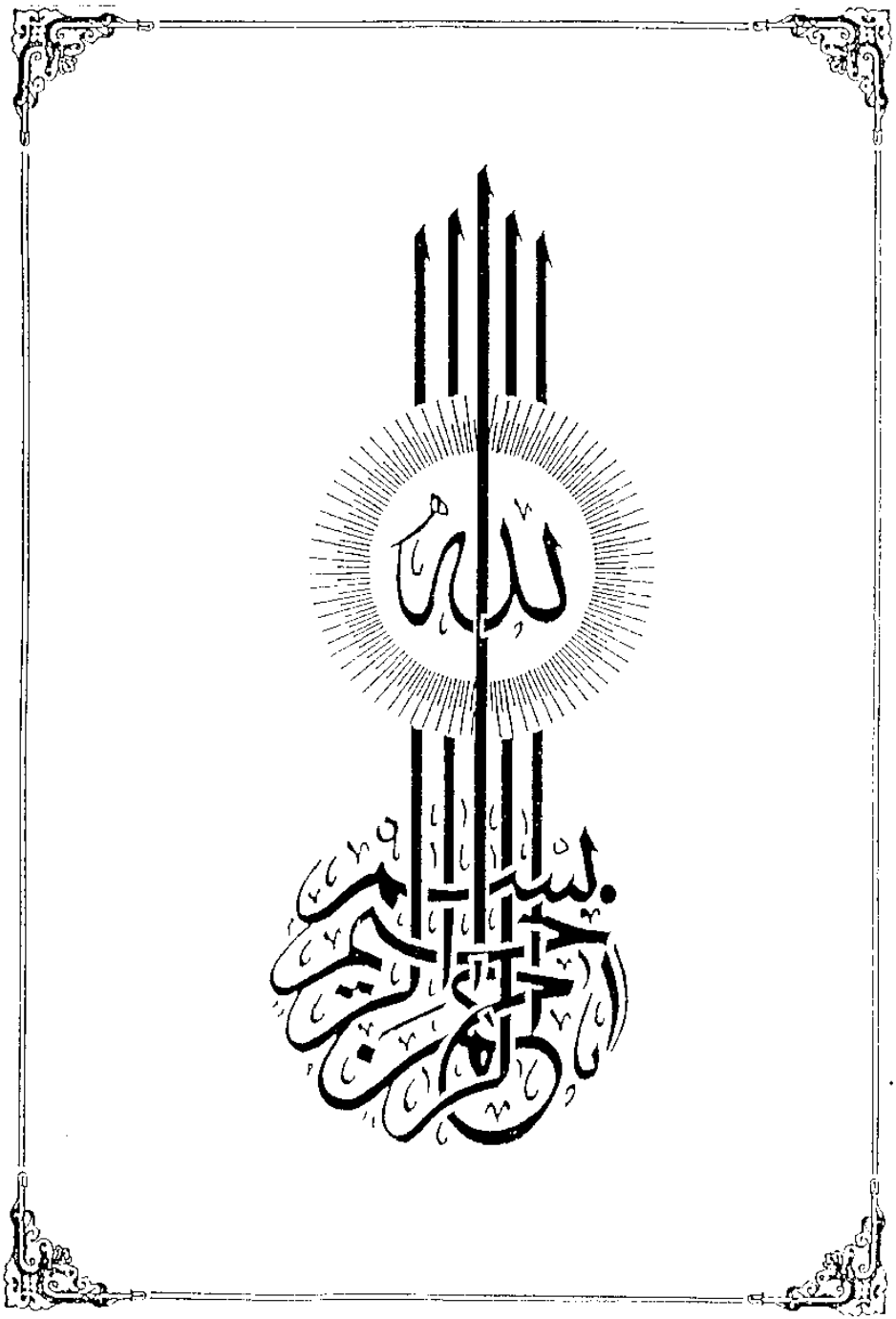

CONTENTS

AIM OF STUDY

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This essay reviews the current concepts of investigations and treatment of venous ulcers and presents the recent theories of pathophysiology of venous ulcers of the leg and describes the haemodynamics of the underlying venous problems in the leg.

Also this essay deals with recent management and treatment of venous ulcers and how to prevent this disorder.

Also it deals with the causes of recurrence and failure of treatment.

INTRODUCTION

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The venous ulcers do not occur in any other creature, but they have probably afflicted man since he achieved an upright posture.

Because they are an uncommon complication of simple varicose veins but a common sequelae of deep vein thrombosis they may have been rare until the advent of civilised living (Browse N. L., 1983).

Chronic venous ulceration occurs in 1-3% of population (Ormiston M. C. et al., 1985).

Nearly all venous ulcers occur in "Gaiter Area", i.e. the lower third of the leg and dorsum of foot. Specifically on the inner aspect of the ankle just above and behind the internal malleolus.

The old distinction between so-called varicose ulcers, stasis ulcers, gravitational and post-thrombotic ulcers is misleading and confusing because the basic pathology in all of them is venous hypertension in the subcutaneous tissues of the ankle. So the term venous ulcers is the best term.

Chronic venous insufficiency is caused by diverse conditions but most commonly it appears after venous valvular incompetence resultant from deep venous thrombosis. However, the actual pathogenesis of chronic venous insufficiency with ulceration remains obscure (Browse N. L., 1986).

Despite the prevalence of venous ulcers affecting the lower limbs it is surprising that in this present day the treatment is so unsatisfactory for the majority of patients. Some of whom are even made worse by inadequate or incorrect treatment. This is disappointing because consistently good results can be obtained if the problem is carefully assessed and the treatment precisely planned and properly executed and good knowledge about pathophysiology is knowed.

REVIEW OF LITERATURE

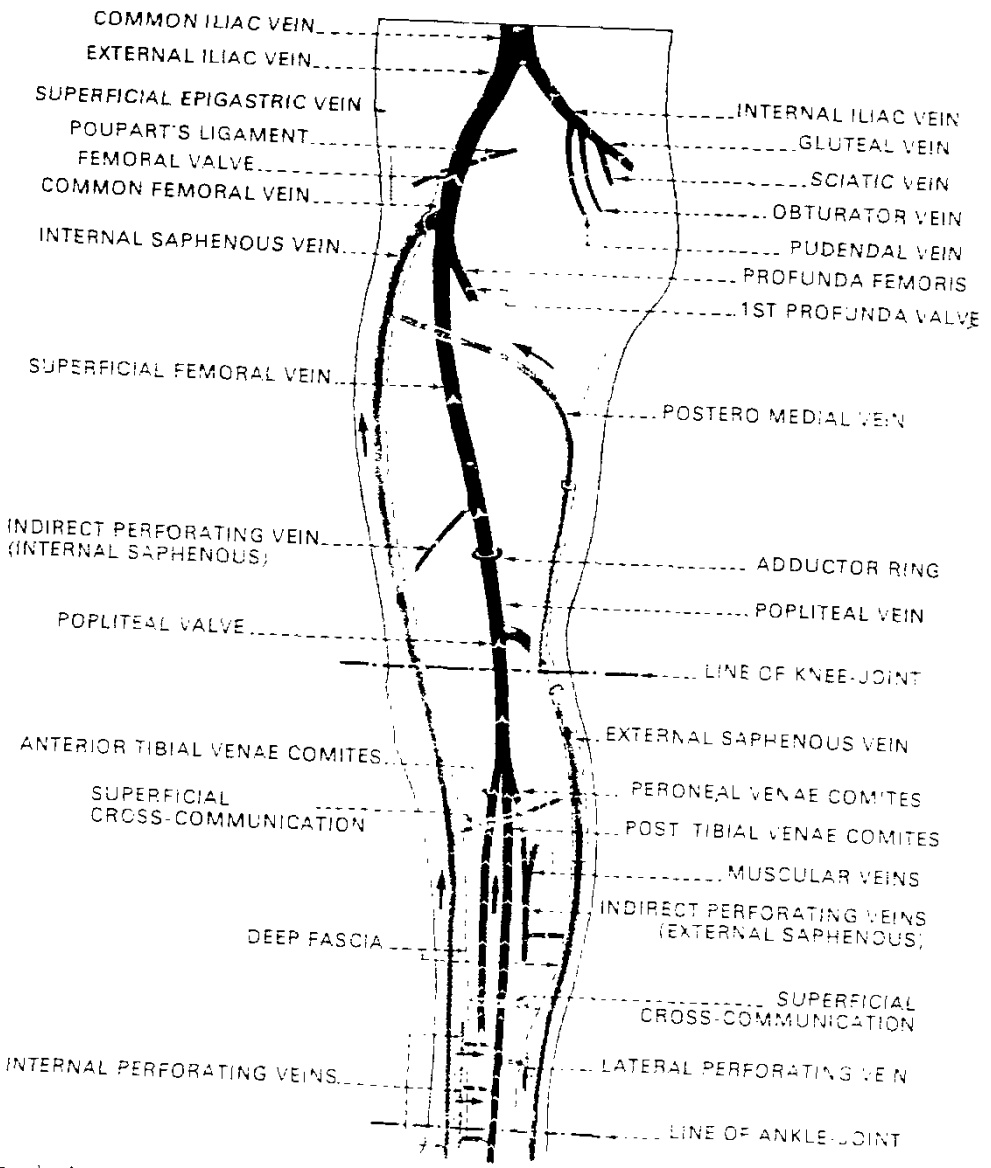

Fig. 1 A diagrammatic rendering of the veins of the lower limb.

GROSS ANATOMY OF VENOUS SYSTEM OF LOWER LIMB

The anatomy of venous system in contrast to arterial system is subjected to individual variation. Each lower limb has three anatomically and functionally sets of veins.

1. Subcutaneous "superficial veins".
2. Deep veins "inter and intramuscular".
3. Perforating veins, which connect 1 and 2.

Superficial venous system :

They lie in the subcutaneous fat. They are observable in three strata.

a. First the thin walled subcuticular venules which form plexus under the skin and become visible in varicosis.
b. These venules join to make a network of larger subcutaneous veins.
c. The third layer is the main trunk of short and long saphenous veins which lie on the deep fascia.

Each superficial system ends by penetrating the deep fascia to enter deep vein.

Venous drainage from the toes and foot :

Each toe has four digital veins, two dorsal and two plantar. The dorsal digital veins join in the toe clefts to form the dorsal metatarsal veins which unite to form a dorsal venous arch, which is linked with medial and lateral marginal veins. The medial part of the dorsal venous arch continued upwards as the long saphenous vein.

The plantar digital veins form four deep metatarsal veins which unite to form the deep plantar venous arch. The dorsal and plantar digital and metatarsal veins communicate with each other at the roots of the toes.

The plantar digital veins also communicate with the superficial veins in the sole forming plantar subcutaneous venous arch.

The perforating veins of the foot are valved in such a way that most venous drainage from the dorsum passes to the long and short saphenous veins at the ankle and from plantar surface to the posterior tibial veins (Fegan and Pegum, 1968).

THE LONG OR INTERNAL SAPHENOUS VEIN

Is the longest vein in the body. Formed by the union of the medial marginal vein, with the medial end of dorsal venous arch, then passes 1-1.5 inches in front of the medial

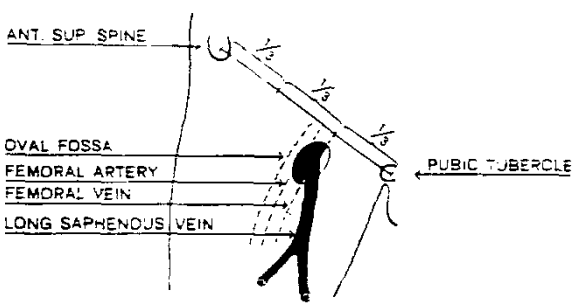

Figure 2 The site and contents of the oval fossa