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Review

The role of quality of life tools in superficial venous disease

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ABSTRACT

Superficial venous disease (SVD) is a common condition in the Western world, with recognized, negative effects on mood and quality of life (QoL) in those affected. Numerous tools exist to assess QoL in patients with SVD. The aim of this article is to review the literature on the role of QoL assessment tools in this disease group, describing the most commonly used instruments and their relevance, assessing the relationship between clinical and functional assessment tools, delineating the correlation among physician and patient reports and discussing the importance of translation.

Contents

Abbreviations: CVD, Chronic venous disease; SVD, Superficial venous disease; CEAP, Clinical Etiological Anatomical Pathophysiological; QoL, Quality of Life; HRQoL, Health related quality of life; NHP, Nottingham Health Profile; SF-36, Short Form 36; SF-12, Short Form 12; SF-8, Short Form 8; VAS, Visual Analogue Scale; PROMs, Patient Reported Outcome Measures; QALY, Quality Adjusted Life Years; SRT, Symptom Rating Test; AVVQ, Aberdeen Varicose Vein Questionnaire; CIVIQ, Chronic Venous Insufficiency Questionnaire; SQOR-V, Specific Quality of life and Outcome Response-Venous; CXVUQ, Charing Cross Venous Ulcer Questionnaire

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1. Introduction

Chronic venous disease (CVD) can be defined as *"(any) morphological and functional abnormality of the venous system of long duration manifest either by symptoms and/or signs indicating the need for investigation and/or care"*. This describes both visual and functional manifestations of a poorly functioning venous system; both the superficial and/or deep venous networks may be affected. The signs and symptoms of CVD can significantly impact on the quality of life of those affected due to their chronicity.

1.1. Epidemiology

Patients with superficial venous disease (SVD) can present with a number of symptoms, including heaviness, itching, aching and throbbing in the lower limbs; often these are worsened by prolonged standing. Amongst of the most common presentations of chronic venous disease are varicose veins, tortuous, elongated superficial veins (>3 mm in diameter) usually found in the lower limb. Varicose veins represent one of the most prevalent conditions in the Western world. Previous epidemiological studies have found that the prevalence of SVD has a relationship to gender, age and parity, and that the reported epidemiology is very heterogeneous. Up to 80% of the population is affected by telangiectasiae (also known as spider or thread veins), while varicose veins affect 20–64% of the population [1]. A gender difference has been reported, with 1–73% of women and 2–56% of men affected respectively [2]; further studies have however found the prevalence to be similar in men and women [3,4]. A lower proportion of the population (5%) is affected by more advanced stages of venous disease (including skin staining and scarring) with a prevalence of healed and active venous ulcers estimated at 1–2% [5].

1.2. Classification systems for SVD

The assessment of SVD can be defined as clinical or functional; similarly, it can be disease-specific or general.

1.2.1. Clinical assessment systems (CEAP)

The Clinical Etiological Anatomical Pathophysiological (CEAP) classification (Table 1) was developed as an international, standardized system used to describe the clinical objective presentation of CVD [6]. It is the most widely used classification system, exploring clinical, anatomical and duplex characteristics, and enables comparisons between different reports in the literature due to its standardized nature.

Despite its international endorsements, CEAP is far from being a highly comprehensive or reliable assessment system [7,8]. CEAP is a purely descriptive classification and is not easily translated into a quantifiable scoring system. For example this classification does not include mixed arterial and venous disease, venous neuropathy and venous claudication [9]. Furthermore, CEAP does not provide any information regarding disease severity or patient perception of disease status. It is a static measure of disease that does not reflect clinical improvement following intervention; for example, a patient who has previously suffered with venous ulceration that has healed will always be classed as a C5 patient. CEAP is a good initial classification system for patients with chronic venous disease; however it is not a measure of disease severity and should be used in conjunction with alternative assessment systems, such as the venous clinical severity score (VCSS).

VCSS was developed to supplement the CEAP classification [10]. It offers a broad quantification of disease severity and is not a detailed descriptive tool for CVD in an individual patient. VCSS takes into account the degree to which patients are affected by CVD, the progression of symptoms and gives additional weight to more severe clinical stages of disease. It has been reported as suitable for measuring changes after surgery, but in studies investigating the use of compression stockings it may not be appropriate [11]. VCSS is responsive to changes in disease severity over time and in response to treatment but again, is a purely clinical measure.

Clinical assessment systems do not necessarily reflect patients' perception of quality of life (QoL). Specific instruments that take this into account are very useful in the assessment of patients with SVD, and can help clinicians to better understand the global, holistic impact this condition has on those affected.

1.3. The importance of quality of life

The World Health Organization defines quality of life as a state of complete physical, mental, and social well being, and not merely the absence of disease. In fact, disease states have multiple dimensions, including clinical presentations, results of investigations and functional effects. However, patient perception of disease and the impact of illness on daily life are of extreme importance when estimating disease burden. QoL assessment tools aim to quantify this dimension into scoring systems that may be of use in terms of determining disease severity and response to treatment[7,8,12–14].

Table 1
CEAP Classification.

C: Clinical classification
C0: no visible or palpable signs of venous disease
C1: telangiectasia or reticular veins
C2: varicose veins
C3: oedema
C4a: pigmentation or eczema
C4b: lipodermatosclerosis or atrophie blanche
C5: healed venous ulcer
C6: active venous ulcer
S: symptomatic, including ache, pain, tightness, skin irritation, heaviness, muscle cramps
A: asymptomatic
E: Aetiological classification
Ec: congenital
Ep: primary
Es: secondary (eg post thrombotic)
En: no venous cause identified
A: Anatomical classification
As: superficial veins
Ap: perforator veins
Ad: deep veins
An: no venous location identified
P: Pathophysiological classification
Pr: reflux
Po: obstruction
Pr,o: reflux and obstruction
Pn: no venous pathophysiology identifiable