ABSTRACT: To analyze the correlation between self-efficacy, self-esteem and adherence to treatment with the Charing Cross Venous Ulcer Questionnaire in people with Venous Ulcer in Primary Health Care. This is a cross-sectional, descriptive and quantitative study, carried out between February and September 2014 at the Primary Health Care of the city of Natal, Rio Grande do Norte, Brazil, with 101 people with VU. A structured form of sociodemographic, health and care characterization; Charing Cross Venous Ulcer Questionnaire; Self-efficacy Scale for Chronic Pain; Multidimensional Therapeutic Adherence Scale; Rosenberg Self-Esteem Scale were used to collect data. The data were tabulated in Microsoft Excel and exported to the Statistical Package for Social Sciences 20.0, in which descriptive and inferential analyses were performed. There were weak to moderate correlations, mostly positive, with significance only between the “emotional state” of Quality of Life and the “Healthy lifestyle” of adherence to treatment. About the correlations of the Charing Cross Venous Ulcer Questionnaire domains with the domains of self-efficacy, self-esteem, there were negative correlations between weak and moderate and significant. Self-efficacy, self-esteem and adherence to treatment showed a correlation with Quality of Life. There is a need to address them in the health evaluation of the person with VU, seeking to impact on a better quality of life.


INTRODUCTION

Venous ulcers (VU) are characterized by the involvement of the epidermis in its entirety. Most of the lesions are in the lower extremity of the lower leg, near the malleolus and in the medial region (LAL, 2015). Its incidence is related to the calf muscle dysfunction, predisposing to venous hypertension, which favors chronic venous insufficiency (CVI) as a late effect (DABIRI et al., 2015).

Approximately 1500 to 3000 thousand adults have active leg ulcers, of which 80% have had the previous venous disease (O’DONNELL; PASSMAN; MARSTON, 2014; WOO et al., 2013). The direct investment related to VU treatment is around ten thousand to twelve thousand dollars per person in the United States of America (O’DONNELL; PASSMAN; MARSTON, 2014).

Also, there is the chronicity of the lesion, the complexity of care and the high number of recurrences, characterized as a relevant public health problem (O’MEARA; CULLUM; NELSON, 2009; NETTEL et al., 2013; SCOTTON; MIOT; ABBADE, 2014; MADDOX, 2012; BRASIL, 2012).

People with VU are susceptible to the quality of life impairment (QOL) since they report pain, altered sleep pattern, decreased mobility (related to pain and exudate), difficulty in maintaining hygiene, and the presence of edema leading to social isolation, self-hatred and low self-esteem (LATZ; BROWN; BUSH, 2015; WALSHE, 1995; PHILLIPS et al., 1994; MADDOX, 2012). In a systematic review related to the QOL of people with VU, it was identified that the most of them reported symptom is a pain, being responsible for the constant awareness of the disease (GREEN; JESTER, 2009).

Self-esteem is the self-evaluation, considering self-worth, self-image, and self-concept (ROSENBERG, 1965). In a study on the levels of self-esteem during life, it was verified that the lower
levels are awakened by problems related to mental health (depression) and physical health (ORTH; ROBINS; WIDAMAN, 2012), like the experience of people with VU, knowing that they face changes in lifestyle and body image (SALOMÉ; BLANES; FERREIRA, 2014). High levels of self-esteem can optimize health recovery (HUTZ; ZANNON, 2011), so it should be considered for these people’s healthcare.

In this perspective, it is also necessary to evaluate self-efficacy and potentiate it through strategies and social support (ARAÚJO, 2014), considering that this belief may influence changing patterns of health behaviors, regarding the improvement of physical and psychosocial aspects and lower risk of recurrence of the injury, increasing QOL and self-management ability (SCHREURS, 2007). Current treatments for venous ulcers are mainly compressive therapies, surgical procedures, pharmacological treatments, physiotherapy, and ulcer care in outpatient settings. The outpatient follow-up of the lesions by a nurse is encouraged to increase adherence to the treatment of the patient with VU. However, the patient’s low adherence to treatment is influenced by high cost, heat, pain and inconvenience caused by the therapies. The incidence of VU recurrences is estimated at 26% 1 year after completing wound healing (LATZ; LAUTERT, 2010; FINLAYSON; EDWARDS; COURTNEY, 2011; JOEKES; ELDEREN; SCHREURS, 2007).

Individuals affected by CVI may have a fragile knowledge about their disease, as well as the etiology of ulceration, and especially how to exercise self-care (FINLAYSIN; EDWARDS; COURTNEY, 2011; HEINEN et al., 2012). Professionals should consider the psychosocial factors that may intervene in the adherence to treatment, needing to continuously measure self-efficacy to infer their interventions (FINLAYSIN; EDWARDS; COURTNEY, 2011), since this may be positively related to adherence (ARAÚJO, 2014).

Current treatments for venous ulcers are mainly compressive therapies, surgical procedures, pharmacological treatments, physiotherapy, and ulcer care in outpatient settings. The outpatient follow-up of the lesions by a nurse is encouraged to increase adherence to the treatment of the patient with VU. However, the patient’s low adherence to treatment is influenced by high cost, heat, pain and inconvenience caused by the therapies. The incidence of VU recurrences is estimated at 26% 1 year after completing wound healing (LATZ; BROWN; BUSH, 2015).

Thus, it is relevant to evaluate the implications of self-efficacy, self-esteem and adherence to treatment for QOL of the person with VU, since knowing the patient against this chronic disease will allow planning health care together with public policies directed and specialized in promoting greater autonomy, selecting more appropriate interventions and promoting adherence to them, aiming at improving QOL.

In this sense, the objective of this study was to evaluate the correlation between self-efficacy, self-esteem and adherence to treatment with the Charing Cross Venous Ulcer Questionnaire (CCVUQ) in people with VU in Primary Health Care.

**MATERIAL AND METHODS**

This is a cross-sectional, descriptive and quantitative study carried out at Primary Health Care in the city of Natal, Rio Grande do Norte (RN), Brazil. According to the Municipal Health Secretary of Natal, the city has five health districts (North I and II, East, West, and South). They have 37 Family Health Units (USF) and 05 mixed units where the data were collected. The Basic Health Units were excluded since they did not follow-up the people with VU.

The population was people with VU monitored in the Primary Health Care, and the sample was by convenience to cover the entire population (n=101). The inclusion criteria were: to be over 18 years old, to have active VU at the time of collection, to be attached to the unit and to have verbal communication skills. The presence of mixed origin ulcers was established as an exclusion criterion since these lesions could lead to situations that would influence the responses.

For the data collection, five instruments were used, as followos:

- A structured form of sociodemographic, health and care characterization (COSTA, 2011).
- **Charing Cross Venous Ulcer Questionnaire (CCVUQ), evaluating QOL in people with VU, in its translated version and validated for Brazil. This instrument is divided into four domains: social interaction, domestic activities, aesthetics and emotional state and can generate a total or domain score, both ranging from zero to 100, growing negatively (COUTO et al., 2012).**

- The Self-Efficacy Scale for Chronic Pain (AEDC), containing three domains (pain control, functionality and other symptoms) ranging from 10 to 100 each. The domain of other symptoms was not used because it does not have a relationship with chronic venous disease (SALVETTI; PIMENTA, 2005).

- The Multidimensional Therapeutic Adherence Scale, with 24 items in three dimensions (healthy lifestyles, compressive therapy, and neurovascular surveillance). Its result is between 1 to 5, which the closer to 1, the better adherence (FAVAS, 2012).

- The Rosenberg Self-Esteem Scale, in its translated version for Brazil. This is a Likert scale, ranging from zero to 30 and the lower the score, the better the individual’s self-esteem (HUTZ; ZANON,
Self-efficacy, self-esteem...

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2011; AVANCI et al, 2007; SCHMITT; ALLIK, 2005).

Data collection took place from February to September 2014. The interviews were conducted by previously trained nurses and nursing students in the health units or at home, with the collaboration of the nursing teams and health community agents of the units surveyed.

The data were organized into tables in Microsoft Excel and exported to statistical software named Statistical Package for Social Sciences 20.0, with descriptive and inferential analyses. The Spearman correlation statistical test was used between CCVUQ and self-efficacy for pain and functionality, self-esteem and adherence to treatment, considering all domains and their total score. The following criteria were adopted: \( r = 0.39 \) (weak); \( r = -0.40 \) to 0.69 (moderate); \( r = -0.70 \) to 1 (strong) (HUTZ; ZANON, 2011; AVANCI et al, 2007; SCHMITT; ALLIK, 2005). Also, the application of the Mann-Whitney tests was used to compare the means; and Friedman, Wilcoxon, and Kolmogorov-Smirnov test with significance level \( = 0.05 \).

The study obeyed the research with human beings, resolution 466/12 (BRASIL, 2012). A favorable opinion was obtained from the Research Ethics Committee (CEP) of the Federal University of Rio Grande do Norte (UFRN), with CAAE 07556312.0.0000.5537. Also, the SMS issued a letter of agreement, and for each unit, a letter was sent on behalf of the URFN Nursing Department. Participants signed the Informed Consent Term (TCLE), ensuring the non-disclosure of personal information.

RESULTS

When evaluating the quality of life, the adherence to treatment, the self-efficacy and the self-esteem of 101 people with VU, there was a trend towards better QOL related to the domain “Domestic activities” (43.26, SD = 23.4), and a tendency towards a worse QOL for the domain “Aesthetics” (57.6; SD = 24.0). There was a better adherence to “neurovascular surveillance” (2.3; SD = 1.3); better self-efficacy for “Pain” (67.3; SD = 25.9) and good self-esteem (8.1, SD = 5.5). There was a statistically significant difference between the domains of QOL, adherence to treatment and self-efficacy, according to Table 1.


<table>
<thead>
<tr>
<th>Scales</th>
<th>Mean</th>
<th>SD</th>
<th>Minimum</th>
<th>Maximum</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CCVUQ</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic activities</td>
<td>43.6</td>
<td>23.4</td>
<td>16.8</td>
<td>84.2</td>
<td></td>
</tr>
<tr>
<td>Social interaction</td>
<td>48.4</td>
<td>21.4</td>
<td>18.0</td>
<td>86.3</td>
<td></td>
</tr>
<tr>
<td>Emotional state</td>
<td>57.0</td>
<td>25.7</td>
<td>20.7</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Aesthetics</td>
<td>57.6</td>
<td>24.0</td>
<td>20.7</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>52.1</td>
<td>16.5</td>
<td>19.8</td>
<td>90.1</td>
<td></td>
</tr>
<tr>
<td><strong>Adherence to treatment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compressive therapy</td>
<td>4.8</td>
<td>0.4</td>
<td>3.0</td>
<td>5.0</td>
<td>(&lt;0.001^*)</td>
</tr>
<tr>
<td>Healthy lifestyle</td>
<td>2.6</td>
<td>0.6</td>
<td>1.4</td>
<td>3.9</td>
<td>(&lt;0.001^*)</td>
</tr>
<tr>
<td>Neurovascular surveill</td>
<td>2.3</td>
<td>1.3</td>
<td>1.0</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td><strong>Self-efficacy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain</td>
<td>67.3</td>
<td>25.9</td>
<td>10.0</td>
<td>100.0</td>
<td>0.001**</td>
</tr>
<tr>
<td>Functionality</td>
<td>59.4</td>
<td>26.6</td>
<td>11.1</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Self-esteem</td>
<td>8.1</td>
<td>5.5</td>
<td>0.0</td>
<td>23.0</td>
<td>0.428***</td>
</tr>
</tbody>
</table>

*Test **Wilcoxon; ***Kolmogorov-Smirnov

Regarding the correlation of the CCVUQ domains and the dimensions of the adherence to treatment scale (Table 2), there were weak to moderate correlations, mostly positive, with significance only between the emotional state of the QOL and the “healthy life” of adherence to treatment (\( r = 0.280, p = 0.005 \)).

Regarding the correlations of the CCVUQ domains with the domains of self-efficacy, and self-esteem, there were negative correlations between weak and moderate and significant, except for the correlation between the domain “Aesthetics” of QOL and self-efficacy for “Pain” and “Functionality”, which did not show any significance, according to Table 3.
DISCUSSION

Regarding the QOL of the participants, there was the mean total score of 52.1 (SD: 16.5), showing the impact promoted by the wound condition through CCVUQ. Venous ulcers can have repercussions on pain, odor, mobility limitation, problems with sleep, reduction of physical and economic freedom, social embarrassment, feelings of low mood and depression, and then, impairment of the QOL of the individual and his family (MCKHAUGAN, CULLUM, DUMVILLE, 2015).

When evaluating the questionnaire by domains, it was verified that the Aesthetics, followed by the Emotional Aspect were the most impaired when comparing them with Social Interaction and Domestic Activities. Findings in Uruguay showed the CCVUQ domains similarly affected, with statistically significant and predominance in younger people (TAFERNABERRY et al., 2016).

The appearance of the lesion represents a change in the body image of the individual and consequently of the aesthetics. This confrontation may occur in a different and individual way since the cultural context is a potential influencer. The anatomical deformities resulting from the lesions cause changes in physical appearance, resulting in low self-image (WAIDMAN et al., 2011). Professionals who offer health care to people with VU need to be attentive to the specificities of each one, reinventing targeted interventions and evaluating them regarding the evolution of wound treatment, towards the promotion of QOL and stability of color image changes of the individual (MADDOX, 2012).

Regarding the evaluation of the self-efficacy scale, there were higher pain scores to than the functionality, revealing that the participants had increased capacities to cope with the pain. In this sense, a study from Sweden (HELLSTRÖM et al., 2016) showed that about 50% of people with chronic wounds felt pain. However, there was a high-intensity association of pain with sleep disorders through the Numeric Rating Scale (NRS), according to another study (UPTON; ANDREWS, 2013). Dysfunctions that interfere with sleep can contribute to the repercussion of poor healing, consolidate the permanence of sadness (HELLSTRÖM et al., 2016) and illness, converging to insomnia, depression and suicidal thoughts (TAVERNER; CLOSS; BRIGGS, 2014).

The presence of VU causes limitations related to mobility and functional capacity, interfering in the Activities of Daily Life (ADL), and increasing the physical dependence of people with this type of injury and allowing the appearance of other feelings, in this case, the impotence (NOTTINGHAM et al., 2012; SALOME; FERREIRA, 2013). It is especially important to consider pain relief and to allow independence for the performance of ADLs to provide a quality life.

### Table 2. Adherence Scale correlated to CCVUQ in 2014. Natal/RN, 2016.

<table>
<thead>
<tr>
<th>CCVUQ</th>
<th>Adherence to treatment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Compressive Therapy</td>
<td>Healthy lifestyle</td>
</tr>
<tr>
<td></td>
<td>r (p-valor)</td>
<td>r (p-valor)</td>
</tr>
<tr>
<td>Domestic activities</td>
<td>-0.085(0.399)</td>
<td>0.133(0.184)</td>
</tr>
<tr>
<td>Social interaction</td>
<td>0.113(0.260)</td>
<td>0.169(0.092)</td>
</tr>
<tr>
<td>Emotional state</td>
<td>-0.071(0.479)</td>
<td>0.280(0.005)</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>-0.066(0.512)</td>
<td>0.194(0.052)</td>
</tr>
<tr>
<td>Total</td>
<td>-0.050(0.620)</td>
<td>0.251(0.011)</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>CCVUQ</th>
<th>Self-efficacy</th>
<th>Self-esteem</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pain r (p-value)</td>
<td>Functionality r (p-value)</td>
<td>r (p-valor)</td>
</tr>
<tr>
<td>Domestic activities</td>
<td>0.285(0.007)</td>
<td>0.646(&lt;0.001)</td>
<td>0.361(&lt;0.001)</td>
</tr>
<tr>
<td>Social interaction</td>
<td>0.278(0.008)</td>
<td>0.594(&lt;0.001)</td>
<td>0.286(0.004)</td>
</tr>
<tr>
<td>Emotional state</td>
<td>0.247(0.019)</td>
<td>-0.259(0.009)</td>
<td>0.520(&lt;0.001)</td>
</tr>
<tr>
<td>Aesthetics</td>
<td>0.155(0.147)</td>
<td>-0.189(0.058)</td>
<td>0.484(&lt;0.001)</td>
</tr>
<tr>
<td>Total</td>
<td>0.324(0.002)</td>
<td>0.553(&lt;0.001)</td>
<td>0.568(&lt;0.001)</td>
</tr>
</tbody>
</table>
assurance for people with chronic wounds so that this systematics stands out in comparison to existing ones (EDWARDS et al., 2013).

In this context, there is a confirmation of the findings of this study, considering that there was a significant correlation trend in almost all domains of CCVUQ: domestic activities, social interaction, emotional state and total score for self-efficacy for pain and functionality, except for aesthetics. Although these correlations were weak to moderate, it can be concluded that the QOL construct is directly related to self-efficacy and its domains, and these are considered as possible targets for interventions.

Also, it is necessary to act preventively through changes in lifestyle and implementation of self-care activities to reduce the relapse rate (BROWN, 2012; HEINEN et al., 2012). Actions aimed at self-efficacy promote self-management (CHOW; WONG, 2014) and may reduce VU recurrences.

Regarding the self-esteem of the participants of this study, a mean equivalent to general good self-esteem was shown. However, regarding the psychological scope of the person with VU, studies evidenced the commitments due to the lack of success in the face of activities that were associated with low leisure activities, with repercussions on frustration, social isolation, and depression, related to decreased self-esteem (SAŁOMÉ; BLANES; FERREIRA, 2014; LOPES et al., 2013). A relevant study also showed the relationship of altered self-esteem according to the type of treatment conducted (SAŁOMÉ; BLANES; FERREIRA, 2014).

The correlations of the self-esteem scale with the domains of QOL were strong and positive, with the presence of statistical significance in all domains and a total score of the CCVUQ, reinforcing the interdependence between the constructs. Thus, to ensure a higher quality of life, the self-esteem of the person with VU should also be boosted. Health professionals should include such approaches in their care programs.

Regarding adherence to treatment, it was assessed that the healthy lifestyle is related to the domain of the CCVUQ emotional state and with the total score, characterizing that patients in which they have a good emotional state, has a greater adherence to the healthy lifestyle.

Health professionals play a key role in this adherence to the healthy lifestyle who are constantly providing guidelines to people with VU to stimulate self-care to avoid recurrence. Guidelines on the correct use of compression stockings, leg raising, dressing change, mobility, following a diet plan and practicing physical activities are always present in their speeches (BROWN, 2012; SAŁOMÉ; FERREIRA, 2013).

Patients with chronic wounds that do not perceive an improvement in lesion healing and with uncontrolled blood pressure or diabetes are prone to impair emotional state (SAŁOMÉ, 2013). Fear, sadness, and impotence are feelings that predominate when the patient has some chronic illness (SAŁOMÉ et al., 2011). However, the hope is a feeling that allows self-control without crisis situations, awakens the search to overcome adversities and contributes to the maintenance of quality of life, following strategies for health promotion and targeting healthy habits through lifestyle and routine changes (BRAGA; CRUZ, 2009; SOUSA, 2009).

CONCLUSIONS

A significant statistical difference was identified between the domains of CCVUQ, treatment adherence, and self-efficacy, demonstrating the involvement of these constructs in person with chronic VU.

There was a correlation between the lifestyle and the emotional state of the person with VU, denoting that the adoption of a healthy lifestyle could positively influence the emotional condition. On the other hand, low self-efficacy and self-esteem were correlated with lower QOL scores.

Therefore, it is necessary to extend the care approach to the person with VU, seeking to permeate the aspects of self-efficacy, self-esteem and adherence to treatment and QOL, facilitating the direction of care and innovation in public policies seeking greater resolution and better QOL.

The difficulty of the study was the low educational level among the respondents, mainly to answer the scales of certainty of the instruments of Self-efficacy.

RESUMO: Objetivou-se analisar a associação entre autoeficácia, autoestima e adesão ao tratamento com o Charing Cross Venous Ulcer Questionnaire, em pessoas com Ulcera Venosa na Atenção Primária à Saúde. Estudo transversal, descritivo e quantitativo realizado entre meses de fevereiro a setembro de 2014, na Atenção Primária à Saúde do município de Natal, no Rio Grande do Norte (RN), Brasil, com 101 pessoas com UV. Para coletar os dados utilizaram-
se: um formulário estruturado de caracterização sociodemográfica, de saúde e de assistência; *Charing Cross Venous Ulcer Questionnaire*; Escala de Autoeficácia para Dor Crônica; Escala Multidimensional de Adesão Terapêutica; Escala de Autoestima de Rosenberg. Os dados foram tabulados no *Microsoft Excel* e exportados para o *Statistical Package for the Social Sciences* 20.0, no qual foram realizadas análises descritivas e inferenciais. Constataram-se correlações fracas a moderadas, em sua maioria positivas, com significância apenas entre o “Estado emocional” da QV e o “Estilo de vida saudável” da adesão ao tratamento. No que concerne às correlações dos domínios do CCUVQ com os domínios da autoeficácia, autoestima, verificaram-se correlações negativas de fracas a moderadas e significativas. A autoeficácia, autoestima e adesão ao tratamento apresentou correlação com a QV da pessoa com UV.


**REFERENCES**


