91 - COMPRESSION THERAPY EFFECTIVENESS IN VENOUS ULCERS HEALING: A LITERATURE REVIEW

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INTRODUCTION

The venous ulcers (UV) account for about 80% to 90% of all injuries and leg injuries, most of the time, are the result of chronic venous insufficiency (CVI) and venous hypertension due to prolonged lack of valves, thrombosis deep venous or dysfunction of the calf muscle pump (McCOLLUM, 2007; FRANÇA; TAVARES, 2003).

This framework affects both the venous system (superficial and / or deep) as the lymphatic, resulting in a number of physical changes such as edema, hyperpigmentation, the eczema, the wildfire and lipodermatoesclerosis, which occur in the skin and subcutaneous tissue, and UV to its maximum expression (VALENCIA et. al, 2001).

Occurrence of chronic and recurrent, the UV have been providing an important public health problem worldwide, accounting for considerable economic impact, significant morbidity and social and psychological wear of individuals and their families (NUNES, 2008).

In Brazil, it is estimated that nearly 3% of the population are carriers of venous ulcers, which amounts to 10% for diabetics (BRASIL, 2002).

According to Torres (2007) and Figueiredo (2003), where assistance is badly handled the bearer of UV, it can remain years without heal, causing a high cost economic, social and emotional.

One of the key elements in the treatment of UV is the correct use of compression therapy. According to Palfreyman et al. (2006), regardless of the type of bandage to be applied in the UV, he must always be associated with a compression therapy. The action of this therapy is based on the pressure on the leg, which compresses the surface veins, reducing its diameter and increasing blood flow, which makes the fluid interstitial spaces of the return to the room or vascular disorders, minimizing or reversing the changes that cause chronic venous hypertension in the skin and the vascular network (BORGES, 2005; MAFFEI, 2002).

Among other ways, the compression therapy can be obtained with the use of socks or bandages which can be classified as elastic or inelastic and have one or more layers. Examples of compression therapy are Unna Boot, the elastic bandage and compression stockings (BLECKEN; VILLAVICENCIO; KAO, 2005).

Despite being recognized and consensus, which is unclear in practice of health services is that the strategy compression is not being used.

Facing the foregoing, it is necessary to better understanding and disclosure about the effectiveness of therapies in the healing of compressive UVS, in order to promote the proper treatment of such injuries to individuals as well as prevention of relapses.

Thus, this study aims to conduct a review of the literature about the effectiveness of therapies in the treatment of compressive UVS.

METHODOLOGY

This is a study of literature review on the subject proposed. For both the search was conducted of studies indexed in the databases MEDLINE and LILACS, Virtual Health Library (VHL), and in the databases PubMed and HighWire Press.

In VHL, the search was performed using the descriptors in Health varicose ulcer and effectiveness of treatment, while in PubMed bases and HighWire Press, have used the terms venous ulcer and compression therapy.

The inclusion criteria used for selection of studies were work related to the effectiveness of Unna boots, or half of compression elastic bandage on the healing of UV, while presenting the above mentioned descriptors; be presented in full text, available online, with free access, and were published from 2000.

With the search in MEDLINE, we found 281 publications, but only 03 met the criteria for inclusion, being selected for the study.

In LILACS database, 03 articles were obtained and the three excluded for not reporting the criteria for selection.

In HighWire Press, 754 items were obtained. After analysis of these, only 07 were selected to meet all the criteria for inclusion default.

Already in PubMed database, we found 597 articles, of which only 36 were made available in full texts of free access. Of those, 05 met the criteria for inclusion, being selected for the study.

Bearing in mind that some items were found in more than a database simultaneously, the end of the search 12 papers were selected to be analyzed and discussed in this review.

The results will be presented in the form of tables and contents of these synthesized for further discussion.

PRESENTATION AND RESULTS DISCUSSION

Articles distribution found and selected the four databases searched is in Table 01.

Table 01. Search results held in databases MEDLINE, LILACS, HighWire Press and PubMed, on the effectiveness of compression therapy in the healing of UV.

DATABASE	FOUND ARTICLES	SELECTED ARTICLES
MEDLINE	281	03
LILACS	03	00
HighWire Press	754	07
PubMed	597	05

As for the synthesis of selected publications in all the databases examined, we can list them, distributing them as shown in Table 02.

Most articles were selected from literature reviews and clinical trials that bringing back data confirming the effectiveness of therapies for the healing of compressive UV.

In a study conducted by Harrison et al. (2005), in which holders of UV received assistance based on evidence, including the use of compression therapy, it was seen that the rate of healing of injuries more than doubled, deployed after the compression therapy.

Bongiovanni, Hughes and Bomengen (2006), reached an outcome similar to implement plans treatment for the injuries of 231 patients with venous ulcers of the study participants. For each lesion was developed a plan of care and in all cases used some form of compression therapy, such as elastic bandage, the boots of Unna and half of compression, resulting in an average time of healing for only 29 days, well below the average of 06 months, as the authors reported.

Corroborating, Borges, Caliri and Haas (2007) in their systematic review on the topic of UV to evaluate the most effective method to improve the venous return and the best topical treatment of ulcers, found that the compression therapy increases the rate of healing UV when compared to treatment without compression and the non-use of compression stockings after healing is associated with the recurrence of ulcer, which was seen in most of the other items discussed.

Table 02. Number of publications located, according to the subjects addressed, listed in the databases MEDLINE, LILACS, HighWire Press and PubMed.

PUBLICATIONS SYNTHESIS	NUMBER OF ARTICLES	%
Effectiveness of hydrocolloid + compression therapy X Unna boot	02	16,6
Effectiveness of compression therapy X compression therapy + surgery	02	16,6
Use of compression therapy	04	33,3
Effectiveness of high compression therapy X low compression	01	8,3
Accession and comfort of 2 layers compression therapy	01	8,3
Effectiveness of elastic compression X inelastic	01	8,3
Effectiveness from 08 different compressive therapy during rest and posture changes, exercise and after two days of therapy use.	01	8,3

Regarding the topic treatment, the results of the study not reached conclusions on the best topical substance to be used (BORGES; CALIRI; HAAS, 2007).

Despite being the consensus use of compression therapy for the healing of UV, Graham et al. (2003), to conduct a study with all the medical members of the College of Family Physicians of Canada, found that more than 50% did not know that compression is an effective treatment for venous ulcers. Moreover, the results showed that the healing of UVS improved when the compression therapy has been used by patients of doctors surveyed.

Among the studies selected, two were a comparison between the use of Unna's boots and the use of hydrocolloid associated with another form of compression therapy, such as elastic bandage.

In the study by Lezak et al. (2004), for example, on healing of UV, participants in the study had their injuries measures as the size and depth, being separated in 03 groups, where the initial area of ulcers was the same in groups 1 and 2, and Group 3, was six times smaller. The first and third groups were then treated with hydrocolloid and elastic bandage and the second group with Unna boots.

The study results showed that the higher rate of healing occurred in group 3, and lowest in group 2, which means that the application of hydrocolloid associated with the compression therapy is more effective than the use of boots and that of Unna the rate is higher for healing ulcers smaller than for larger and deeper lesions (LEZAK et al, 2004).

Already in the study by Koksala and Bozkurtb (2003), in which holders of UV were divided into 2 groups (Groups A and B), and treated with boots of Unna (group A) and hydrocolloid associated with elastic bandage (group B); it was found that there was no significant difference between the use of Unna's boots and hydrocolloid associated with elastic bandage on the rates of complete healing, reduction of weekly wound, healing time and time spent with the application of therapies.

The hydrocolloid plus elastic compression, however, was higher than that of Unna boots on the comfort and convenience, and the presence of pain, which was lower in patients treated with hydrocolloid and elastic bandage (KOKSALA; BOZKURTB, 2003).

Overall, the results of the study can say that both methods of treatment are effective for UV, and the hydrocolloid with elastic compression better on the comfort, convenience and intensity of the treatment of pain. (KOKSALA; BOZKURTB, 2003).

As can be seen in Table 02, were selected 02 studies that deal with the effectiveness of compression therapy when compared with surgery associated with compression.

In both studies, was not found any significant difference between the isolated compression and compression associated with surgery in relation to the healing of UV. However, on the occurrence of relapses, it was seen that the technique of surgery and use of compression is more effective than compression alone, with reduction in relapses. (McCOLLUM, 2007; GOHEL et al, 2007).

As for membership and comfort related to compression therapy, fundamental to the healing of UVS, Mudge et al. (2007) conducted a study for six weeks to assess adherence and comfort associated with the use of compression therapy of 02 layers, a less bulky system behavior in order to increase comfort while maintaining adequate levels of compression. While achieving a cure was not the purpose of this study, 33% of patients achieved a complete healing of their injuries and more than 75% showed a reduction of the injury. As for the purpose of the study, it was seen that the majority (95.5%) patients reported using the compression system in more than 75% of the time and 69.4% felt the compression system used comfortable (MUDGE et al, 2007).

Regarding the inelastic compression therapy, represented by, for example, to Bota Unna, and elastic compression therapy, such as elastic bandage and compression stockings, there is still controversy about the effectiveness of these therapies in the healing of UV. In order to clarify this issue, Blecken, Villavicencio and Kao (2005) randomly compared the use of non-elastic compression (Group A) with the use of four layers of elastic bandage (group B) in patients with UV.

At the end of 12 weeks of observation period was seen that the rate of healing was faster in group A than in group B,

while the same number of injuries have healed the end of this period in both groups (BLECKEN; VILLAVICENCIO; KAO, 2005).

Hafner, Botonakis and Burg (2000), trying to assess the pressure exerted by 08 different systems of compression therapy during rest and posture changes, exercise and after 02 days using the therapy, conducted a comparative study, which was not possible to detect differences significant pressure on the different types of therapies compressive. The main findings were that bandagens high-compression lossless compression present during the day, although they are potentially dangerous for some patients with compromised blood, and the compression driven by an inelastic Bota originally from Unna is a good option, because it considerable pressure However, decreases significantly when the patient is standing or walk.

Finally, the literature review proposed by Simon, Dix, and McCollum (2004), has emphasized that the treatment of UVS is based on the prevention of venous hypertension and reducing their impact through compression therapy, and that the level compressive more effective to overcome the venous hypertension is approximately 40 mmHg. In this study, Simon Dix, and McCollum identified twenty-two clinical trials that brought to compression therapy as effective in the treatment of UVS and is not found significant differences regarding the effectiveness of different compression systems.

CONCLUSION

The analysis of selected publications realize that the use of compression therapy is recognized as the mainstay of treatment for UVS, promoting significant improvement in venous return and increased rate of healing of injuries. However, so far no concrete information as to which compression therapy is more effective in the treatment of UVS, being necessary to carrying out further clinical trials on this issue.

Moreover, we know that no compression therapy has been used largely for health services, and a vital debate and reorientation of caring for these injuries in the fields of education, research and extension, and developing and implementing protocols of care, in order to qualify the care to individuals with UV for better development of these lesions and prevent relapses.

Is noted also that few of national studies on this topic, and the development of interesting research that strengthen the national literature on the subject and subsidize the professionals in their daily practice with individuals with UVs.

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COMPRESSION THERAPY EFFECTIVENESS IN VENOUS ULCERS HEALING: A LITERATURE REVIEW

ABSTRACT

This is a study of literature review in order to check the databases Medline, Lilacs, Pub Med and HighWire Press, publications about the effectiveness of therapies in the treatment of compressive UVS. For this, they were used as descriptors the terms and effectiveness of varicose ulcer treatment, to the databases Medline and Lilacs and venous ulcer and compression therapy in PubMed and HighWire Press. The inclusion criteria used for selecting the items were work related to the effectiveness of Unna boots, or half of compression elastic bandage on the healing of UV; be presented in full text, available online, with free

access, and have been published from the year 2000. We selected 12 articles that addressed: the use of compression therapy (04 articles), the effectiveness of hydrocolloid associated with compression therapy compared the effectiveness of boots from Unna (02), the effectiveness of therapy and compression therapy of compression associated with surgery (2), The effectiveness of compression therapy of high compression and low compression (01), the accession and the comfort of compression therapy of 02 layers (01), the effectiveness of the inelastic and elastic compression (01), and the effectiveness of different therapies 08 compressive during rest, posture changes, exercise and after two days of use of therapy (01). In all studies was noted that the compression therapy is effective in healing of UVS and prevention of relapses, but no at this time, concrete information on what kind of compression therapy is more effective, being necessary to carrying out further clinical trials about this issue.

Keywords: Varicose ulcer; treatment effectiveness; compression therapy.

EFETIVIDADE DA TERAPIA COMPRESSIVA NA CICATRIZAçãO DE úLCERAS VENOSAS: UMA REVISãO DA LITERATURA

RESUMO

Trata-se de um estudo de revisão de literatura com o objetivo de verificar nas bases de dados Medline, Lilacs, Pub Med e Highwire Press, publicações acerca da efetividade de terapias compressivas no tratamento de UVs. Para isso, foram utilizados como descritores os termos úlcera varicosa e efetividade de tratamento, para as bases de dados Medline e Lilacs e ulcer venous e compression therapy na PubMed e HighWire Press. Os critérios de inclusão adotados para a seleção de artigos foram: trabalhos relacionados à efetividade da Bota de Unna, meia de compressão ou atadura elástica na cicatrização de UV; serem apresentados em texto completo; estarem disponíveis online, com acesso livre; e terem sido publicados a partir do ano 2000. Foram selecionados 12 artigos que abordavam: o uso da terapia compressiva (04 artigos), a efetividade do hidrocolóide associado à terapia compressiva comparado a efetividade da Bota de Unna (02), a efetividade da terapia compressiva e a da terapia compressiva associada à cirurgia (2), a efetividade da terapia compressiva de alta compressão e a de baixa compressão (01), a adesão e o conforto da terapia compressiva de 02 camadas (01), a efetividade da compressão elástica e a da inelástica (01), e a efetividade de 08 diferentes terapias compressivas durante o repouso, alterações posturais, exercício e após dois dias de uso da terapêutica (01). Em todos os estudos foi constatado que a terapia compressiva é efetiva na cicatrização de UVs e prevenção de recidivas, entretanto não existem, até o presente momento, informações concretas sobre que tipo de terapia compressiva é mais efetiva, sendo necessário a realização de mais ensaios clínicos acerca dessa questão.

Descritores: úlcera varicosa; efetividade de tratamento; terapia compressiva.