

Patient Concordance with Compression Therapy

**ICC meeting
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Learning objectives:



- **To briefly review the theoretical approaches to understanding compliance, concordance and adherence**
- **To review the literature on concordance and compression therapy**
- **To explore from clinical practice the patient challenges and solutions**

Complex definitions



- **Compliance** . The degree to which a patient deviates from professionally prescribed treatment (Paternalistic view)
- **Concordance** – agreement between professional and patient about treatment goals (shared views)
- **Adherence**- the continuation of the agreed plan

Problems with research in concordance



- **Definitions of compliance, concordance and adherence are not consistently used**
- **Most research involves professional judgments of compliance behaviour**
- **When patient self report of compliance is used it is likely to be an overestimate of actual behaviour**
- **Patients views on why difficulties occur are rarely taken account of**
- **General research in this area has failed to identify a typical patient profile**

Literature review on concordance and compression therapy

Search terms : compliance; concordance; adherence & compression therapy, compression bandaging ,hosiery, IPC and all types of leg ulcer/leg ulceration

Databases : CINAHL ; Pubmed ; Embase ; Cochrane systematic reviews; JBI reviews; Psychlit .

All databases searched up to May 2015



The impact of psychosocial factors on adherence to compression therapy to prevent recurrence of venous leg ulcers

Finlayson et al 2010 (Journal of Clinical Nursing)

- Retrospective review 122 venous ulcer patients to identify self care strategies
- Compression worn four/seven days a week (median)
- Wearing compression hosiery positively associated with
 - Knowledge of condition ($p=0.002$)
 - Higher self efficacy scores ($p=0.026$)
 - Lower depression scores ($p=0.009$)
- These results only explained 26% of the variance suggesting many other unknown factors



The impact of psychosocial factors on adherence to compression therapy to prevent recurrence of venous leg ulcers

Finlayson et al 2010 (Journal of Clinical Nursing)

- Of the 53% (n=65) who only wore compression occasionally or not at all 31% (n=20) could not apply/remove hosiery
- 32%(n=21) of this group did not believe any benefit or that prevention of ulceration would occur
- 13 (11%) had issues of aesthetics
- The same study found adherence to other self care strategies was low and occurred in only 50%
- *(other studies eg Jull et al 2004 found that belief in hosiery distinguished compliance groups)*



Factors that influence healing of chronic venous ulcers: a retrospective cohort .

Formentini Scotton et al (2014) Anais Brasileiros de Dermatologia

- **Retrospective analysis of 94 patients (137 ulcers)**
- **>50% ulcer reduction in 40% ,complete healing in 27 % at 1 year**
- **Poorest healing at 6 months associated with:**
 - **Long ulcer duration (RR 0.95 CI 0.91-0.98)**
 - **Poor adherence to compression therapy (RR 4.04 CI 1.31-12.41)**
 - **Infection episodes (RR 0.95 CI 0.23-0.76)**



Interventions to enhance patient compliance with leg ulcer treatment :a review of the literature

Hecke et al (2007) Journal of Clinical Nursing

- **Compliance defined as the extent to which worn or treatment followed**
- **Self reporting used to measure compliance**
- **Class III stockings enhanced compliance compared to bandages**
- **No evidence IPC improved compliance**
- **No evidence of health system approaches improving compliance**
- **Educational programmes combining cognitive , behavioural and affective components had a positive effect on elevation but not compression therapy**
- **Little evidence to guide practice**



Living with venous leg ulceration : issues concerning adherence

Mudge et al (2006) British Journal of Nursing

- Patients lacked understanding of their condition
- Patients stated they would report adherence to compression even if this was untrue
- Fear that compression would increase pain and sleeplessness
- Compression therapy did not fit with daily life



Compression therapy in elderly and obesity

Reich-Schupke et al 2012

Patients aged >60

- greater number of ulcers
- Need more help with compression (71% versus 47% in <60 year olds)
- Obese patients more likely to complain of constriction compared to normal weight (35% vv 19%)



Obesity /Chronic oedema and compression

Derby Lymphoedema Service (UK)

- 75%obese
- 24%morbidly obese
- Of the morbidly obese 2% could apply and remove hosiery
- Increased rate of cellulitis
- Poor response to compression therapy



Donning Devices (Foot Slips and Frames) enable elderly people with severe chronic venous insufficiency to put on compression stockings

Slippel et al (2015) Eur J Vasc Surgery

- **40 patients with CVI C4-C6**
- **Randomised controlled trial of donning devices**
 - **One 40mmHg stocking**
 - **2 superimposed 20mmHg stocking (one with open and one with closed toe)**
- **Different donning devices (foot slip/frame)**
- **Success rate without donning 60%**
- **Increased success rates of 88-93%**
 - **7.5% reduction in those who could not apply or remove compression at all**
- **73% could apply hosiery without a donning device after instruction**
- **Patients with visual handicap, paresis, plegia or dementia were excluded**
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Prescription and adherence to lymphoedema self-care modalities among women with breast cancer-related Lymphoedema

Brown et al (2014) Support Care Cancer

- Questionnaire to assess 10 BCRL self care modalities
- Prescription and adherence measured at 3,6 and 12 months
- 141 patients
- Self care strategies decreased over time and were sub-optimal
- 69% reported an average of <75% adherence
- Use of compression bandaging decreased over one year (p=0.011)

(Vignes et al (2007) Showed that poor adherence to bandaging and compression associated with high risk of increase in limb volume over 1 year (55/61%)

Prescription and adherence to lymphoedema self-care modalities among women with breast cancer-related Lymphoedema

Brown et al (2014) Support Care Cancer

Problems with compression

- 34% stated it was uncomfortable (hot/itchy)
- 3% needed to alter clothing to accommodate compression
- 30% had difficulty with self bandaging
- Daily treatments were burdensome and impaired quality of life and manifested as poor adherence

*(Multivariate analysis did not find any significant predictors ... It is plausible that **psychosocial and behavioural characteristics**, such as knowledge, intention, and self-efficacy are more important predictors of self care than demographic or clinical characteristics)*

Randomised controlled trial comparing European standard class I and class II compression stockings for ulcer recurrence and patient compliance

Clarke-Moloney et al (2012) International Wound Journal

- **100 patients with healed venous ulceration**
- **Randomised to class 1 (n=50) or class 2 (n=50) European hosiery**
- **Follow up at 1 week,3,6,9 and 12 months**
- **Recurrence rate 16% at one year**
- **Non significant difference between classes although higher in Class 1**
- **89% reported compliance**
- **Non compliance associated with greater risk of recurrence (p<0.0001)**
- **Lowest recurrence seen in highest compliance groups irrespective of compression class**
- **Lower rate of recurrence in those with superficial and deep incompetence receiving Class II hosiery**

Process underlying adherence to leg ulcer treatment . A qualitative field study

Van Hecke et al (2011) International Journal of Nursing Studies

- **26 patients with venous ulcers (interviews and observation)**

Themes

- **Trust in the nurse was central to adherence**
- **Patients who had a trusting relationship showed better adherence to lifestyle modification**
- **Trust facilitated by nurses spending “meaningful” time**
- **Care provided beyond patient expectations /being attentive to pain and other problems / talking**
- **“compliance” occurred even if patients did not see benefits**



Physical activity and adherence to compression therapy in patients with venous ulcers. Heinen et al (2007) Archives of Dermatology

- To assess the levels of physical activity, walking and leg exercises in venous leg ulcer patients and adherence to compression therapy
- 150 outpatients
- **40% showed full adherence to compression**
- Low level of activity – less than a 10 minute walk each week(measured by an accelerator)
- **Chudek et al (2012)** found that patients who were not compliant with compression were also non compliant with pharmacological therapy (venoactive drugs)
- Coexisting obesity and chronic illness decrease adherence



To explore how professional attitudes to concordance influence our understanding

Professional issues

- **Incorrect choice of compression for underlying aetiology**
- **Failure to adapt to limb shape and tissue profiles**
- **Fear that compression is “dangerous”**
- **Lack of skill in application**
- **Compression hosiery : wrong choice of garment ,poor fit**



**How the wrong fitting
of hosiery makes things worse**



Problems with current compression



PROBLEMS



Uncontrolled oedema



**Chronic oedema
extending to the
thighs**





Inelastic Strapping Devices

- **Non-elastic interlocking bands**
- **Sustained and adjustable compression**
- **Patient self application**







- containment by hosiery
- concurrent obesity
- genital lymphoedema
- abdominal lymphoedema

THANK YOU

