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Physiotherapy management of plantar fasciitis / fasciosis

Lead executive	General Manager
Author and contact number	Highly Specialist Physiotherapist – 01244 362971

Type of document	Guidance
Target audience	Physiotherapy staff
Document purpose	To provide an evidence based pathway for the physiotherapy management of patients with plantar fasciitis / fasciosis

Document consultation		
AMH – Wirral	Yes	Jan Pye; Rashmi Parhee; Jose Ferran; Geraldine Swift; Joanne Hurley; Neal Fenna; Linda Friend; Iain Wells; June Thornton;
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Staff side	Yes	AngelaE. Edwards; Dave Donal; Terry Unwin;
Other –	Yes	Sally Bestwick; Amanda Miskell; Helen Pilley;

Approving meeting	West Locality Governance and Risk Meeting	3-Dec-13
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Implementation date	Dec-13	

CWP documents to be read in conjunction with	HR6 MH13 CP3	Mandatory Employee Learning (MEL) policy Part IV and IVA - MHA 1983 Consent to treatment Health records policy

Training requirements	There **is** specific training requirements for this document. Physiotherapists using this guideline are qualified Chartered Physiotherapists who are state registered with the Health Professions Council. In-service training has been used to present the guideline. Additional training can also be provided for any staff member, if a development need is identified during Personal Development Review process or Clinical Supervision sessions.

Financial resource implications	No

Equality Impact Assessment (EIA)

Initial assessment	Yes/No	Comments
Does this document affect one group less or more favourably than another on the basis of:		
• Race	No	
• Ethnic origins (including gypsies and travellers)	No	
• Nationality	No	
• Gender	No	
• Culture	No	
• Religion or belief	No	
• Sexual orientation including lesbian, gay and bisexual people	No	
• Age	No	
• Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
Is there any evidence that some groups are affected differently?	No	
If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable?		
N/A		
Is the impact of the document likely to be negative?	No	
• If so can the impact be avoided?	N/A	
• What alternatives are there to achieving the document without the impact?	N/A	
• Can we reduce the impact by taking different action?	N/A	
Where an adverse or negative impact on equality group(s) has been identified during the initial screening process a full EIA assessment should be conducted.		

If you have identified a potential discriminatory impact of this procedural document, please refer it to the human resource department together with any suggestions as to the action required to avoid / reduce this impact.

For advice in respect of answering the above questions, please contact the human resource department.

Was a full impact assessment required?	No	
What is the level of impact?	Low	

Document change history

Changes made with rationale and impact on practice
1.

External references

References
1. Irving D B, Cook J L, Menz H B (2006) "Factors associated with chronic plantar heel pain:a systematic review" Journal of Science and Medicine in Sport 9,11-22
2. Neufeld S L, Cerrato R (2008) "Plantar Fasciitis: Evaluation and treatment" Journal of the American Academy of Orthopaedic Surgeons 16(6), 338-346.
3. Sweeting D, Parish B, Hooper L,Chester R (2011) "The effectiveness of manual stretching in the treatment of plantar heel pain: a systematic review" Journal of foot and ankle research 4, 19.
4. Thomas J L, Christensen J C, Kravitz S R, Mendicino R W, Schuberth J M, Vanore J V, Weil L S, Zlotoff H J,Bouchee R, Baker J (2010) "The diagnosis and treatment of heel pain: A clinical practice guideline-revision 2010" The journal of foot and ankle surgery 49,1-19.

Monitoring compliance with the processes outlined within this document

Please state how this document will be monitored. If the document is linked to the NHSLA accreditation process, please complete the monitoring section below.	The document will be monitored by the Lower Limb Special Interest Group who have been involved in developing the guideline. Any changes in light of new evidence will be made by the group and reported to the wider team in the general staff meeting or via in-service training. The guideline will be audited after 5 years by the team.

Content

1. Introduction

This guideline will be used by the musculoskeletal outpatient physiotherapists, working for CWP, for assessment and treatment of all patients presenting with Plantar Fasciitis. Locations include Chester Physiotherapy Centre, Ellesmere Port Hospital, Tarporley Hospital and satellite GP clinics.

Patients with Plantar Fasciitis are frequently referred to physiotherapy services within CWP via the Adult Musculoskeletal Assessment and Management Service. An accurate assessment and diagnosis is essential to implement an effective treatment programme. The aim of the guideline is to provide a framework to support the most effective management of the patients who are referred into the physiotherapy service with a diagnosis of plantar fasciitis, using the best available evidence to date. This enables musculoskeletal physiotherapists, employed by CWP, to manage these patients conservatively.

The aims of the guideline are:

- To establish a consistent approach to the conservative management of plantar fasciitis based on the best available evidence;
- To discuss differential diagnosis and signpost their management;
- To improve clinical outcome.

Although this guideline is not intended to be applied rigidly, it should be followed in most cases. The use of any guideline requires that the physiotherapist is constantly aware of the patient as an individual. The suitability and applicability of guideline recommendations must therefore be determined. If there are good reasons to do so, deviation from the guideline is permissible.

2. Definitions

Plantar fasciitis or fasciosis is defined as pain along the proximal plantar fascia and its attachment in the area of the calcaneal tuberosity. This pain arises from mechanical overload, whether this is because of biomechanical faults, obesity, work habits or poor footwear. Most cases of medial heel pain respond to recommended therapy as listed in this guideline.

3. Procedure

No.	Action	Rationale
1.	Take a detailed and thorough case history.	- To establish the nature of the condition; - To rule out red flags. (appendix 1); - To provide a framework for the objective assessment; - To establish patients expectations.
2.	Obtain documented informed consent for clinical examination.	- To comply with the consent to examination and treatment policy'.
3.	Ensure patient is comfortable and relaxed.	- To aid examination.
4.	Undertake clinical examination of the patient and documentation of findings	- To establish and aid diagnosis; - To identify patients with plantar fasciitis; - To rule out red flags not previously identified (appendix 1); - To establish a baseline for rehabilitation; - To establish if further investigations are required; - To comply with health records policy.
5.	Formulate a diagnosis of the patient's condition, considering differential diagnoses (appendix 2).	- To ensure the patients condition is managed most effectively.
6.	If red flags identified, liaise with an advanced Practitioner or referring GP regarding an Urgent Orthopaedic Referral	- To ensure patient is referred for an Orthopaedic opinion as soon as possible to enable further investigations and management.

No.	Action	Rationale
7.	Explain treatment plan to patient and obtain informed consent for treatment / management.	- To ensure patient understanding and compliance.
8.	Follow treatment plan (appendix 3).	- To ensure treatment is of good quality and is evidence based; - To ensure that treatment is standardized across the trust; - To ensure effective progression of treatment.
9.	If the patient is better, discharge patient with advice	- To ensure improvement is maintained.
10.	If the patient has not reached maximal potential, discuss with a senior physiotherapist or Advanced Practitioner	- To ensure diagnosis is correct; - To ensure all treatment options have been explored; - To suggest further management options e.g. investigations, Orthopaedic Opinion.

4. Duties and responsibilities

4.1 Author

Author(s) are responsible for ensuring that:

- Once ratified, the clinical guideline is maintained in an editable electronic version (master copy);
- An impact assessment has been completed for the document and submitted to the Head of Corporate Services and Business;
- The responsible committee or officers are alerted of any necessary review to be undertaken;
- All amendments are completed subsequent to the findings of any review.

4.2 Heads of service

Heads of service and line managers are responsible for:

- Bringing the attention of their staff to the publication of a new document;
- Providing evidence that the document has been cascaded within their team or department;
- Where appropriate, ensuring the new document is effectively implemented;
- Ensuring that their staff attend training in respect of new documents.

4.3 Employees

The Employee is responsible for:

- All staff employed by CWP are responsible for adhering to this guideline, regardless of role, band, discipline or service area.

Appendix 1 - Red flags

1. Constant unremitting pain: may indicate malignancies, septic arthritis or osteomyelitis.

2. Previous history of cancer, night sweating, sudden unexplained weight loss.

3. History of recent trauma: crush injury, road traffic accident, fall from heights or sports injury.

4. Osteoporosis

Appendix 2 - Differential diagnosis

Condition	Description	Clinical findings	Management
Plantar Fascia rupture (rare)	Patient complains of severe acute onset of pain in the medial arch following trauma	Examination may reveal a palpable deficit in the plantar fascia, as well as maximal tenderness distal to the medial tubercle of the calcaneus. Arch profile may be noticeably lower than the other foot.	Dependant on referral route, discuss with advanced practitioner or GP if further examination or an orthopaedic opinion is indicated.
Fat Pad Syndrome	Injury to the heel such as jumping on a hard surface can cause the fat pad to spread out losing some of the cushioning over the heel. This makes weight bearing very uncomfortable	On palpation pain is felt in the centre of the heel. Pain usually absent on rising in the mornings A notable atrophy of the fat pad	Cushioning very important with use of gel heel cups, taping and good supportive cushioned footwear. If very painful then pain management such as NSAIDS or electrotherapy.
Tarsal Tunnel Syndrome	Patients may describe a burning sensation around the plantar / medial aspect of the heel. This worsens on weight bearing or at night	Positive Tinel's sign May have wasting of intrinsic muscles in the medial aspect of the foot and sensory impairment over the sole. Two-point discrimination sensory testing may indicate which branch of the plantar nerve is compressed. Tarsal Tunnel Syndrome test positive (hold stretch into abduction / Dorsiflexion / Eversion.	Initially conservative treatment with arch supports to off load the nerve. Also NSAIDS or local electrotherapy may help if inflammation is causing the compression. If failure to resolve and dependant on referral, discuss with Advanced practitioner or GP if further examination or an Orthopaedic opinion is indicated.
Calcaneal stress fracture	History may reveal a recent abrupt increase in daily exercise. Pain is worse with weight-bearing and relieved by rest	Patients usually present with calcaneal swelling, increased warmth and tenderness to touch. Positive "squeeze test" when the patients calcaneus is squeezed between the examiners fingers and the thenar eminence of their hand	Dependant on referral route, discuss with advanced practitioner or GP if further examination or an Orthopaedic opinion is indicated.

Condition	Description	Clinical findings	Management
Plantar Fasciitis	Patient complains of pain on the medial aspect of the plantar surface of the heel. Patient has difficulty in walking first thing in the morning for the first few steps and also on rising from sitting. Symptoms may have arisen from an increase in time on their feet or a change to job pattern.	Pain on palpation of the medial tubercle of calcaneus +/- tenderness along the plantar fascia band. May have tight gastrocnemius, soleus and plantar fascia band. Check for any ankle or subtalar joint stiffness. Usually patients are overweight. Arch profile can be low.	Initially conservative management for 6-8 weeks. This is to include stretches of the calf muscles and plantar fascia. Advice on local ice / heat, NSAIDS footwear advice- particularly cushioned footwear like sporting trainers / gel heel cups. Advice on reduction of time spent on feet. If failure to improve then may warrant local electrotherapy to the area, mobilisation of the subtalar joint, trigger point and myofascial release, strapping or insoles. Third line intervention may include injection therapy, although rarely indicated as a high risk of rupture, or night splints. If no change discuss with Advanced Practitioner or GP if further examination or an orthopaedic opinion is Indicated Surgery is rarely performed.

Other atypical presentations

Inflammatory pathology / Enthesopathy

- More than 30 minutes severe morning pain;
- Bilateral presentation;
- Other inflammatory indicators present.

Lumbar spine referred (S1 nerve root)

- Burning pain around medial ankle or whole sole of foot;
- Positive slump or straight leg raise test.

Myogenic referred pain

- Active trigger points within Gastrocnemius, Soleus, Quadratus plantae, Flexor digitorum longus, or Abductor hallucis longus**.**

Benign Plantar Fibromatosis (Ledderhose's Disease)

- Palpable lump felt within the mid part of the plantar fascia.

Tibialis Posterior Dysfunction

Deltoid ligament partial or complete rupture

- Medial ankle pain and/or a change in shape of medial arch- Adult acquired flat foot.

Appendix 3 - Clinical pathway for heel pain