Worcestershire Acute Hospitals NHS Trust

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Orthopaedic pathway
Microfracture of the Tibial or Femoral Condyle

Owner:	Benjamin Thomas Physiotherapy and Orthotics Manager
Approved by	Therapies Clinical Governance Group
Approval Date	31st October 2023
Review Date	31st October 2026 This is the most current document and should be used until a revised version is in place

Key Amendments

Date	Amendments	Approved by:
25th January 2023	Document extended to 30th June 2023 whilst under review.	Dr J Trevelyan/ Benjamin Thomas
23rd June 2023	Document extended for another 3 months whilst under review.	Benjamin Thomas
31st October 2023	Document approved with no changes	Therapies Clinical Governance

Details of Pathway

It is important to know the site and extent of the microfracture and at what point in knee flexion the lesion contacts the tibia/femur. This information should be available from the operating Consultant.

Day 1 to 2 weeks.

- Main aims are to reduce pain and swelling, gradually regain range of movement and promote a healing environment.
- 500 reps of passive knee flexion and extensions 3 times a day, working into flexion and extension range of movement.
- Passive knee extension to regain range of movement.
- Static quads. Progress to SLR if pain free and no lag.
- Patella mobilization.
- Active NWB hip and ankle exercises.
- Core stability and upper limb exercises.
- Ice.
- Aim for full passive extension, minimal pain and 100º knee flexion at week 2.
- Check weight bearing status on operation notes.

2 – 4 weeks.

- Stationary bike no resistance.
- Isometric co-contractions outside range of movement of contact of lesion.
- Calf and hamstring stretches.
- Early pylometric at the end of this stage.
- Continue hip and ankle, upper body and core stability exercises.
- Aim for 125º knee flexion at 4 weeks.

4 – 8 weeks.

- If can, PWB.

- Gradually increase weight bearing avoid pain and swelling.
- Gradually increase standing times.
- Mini squats 0º - 45º
- Profitter in sitting – if large femoral lesion wait till week 6
- Calf raises
- Propreoception exercises
- Step ups if small knee lesion
- At end of period can use low resistance on static bike
- Should have minimal effusion non by 6/52 and pain by 6/52
- By week 8 should have full range of movement

8 – 16 weeks.

- Goals: to increase muscle strength and increase functional activities, aim for low weight high reps initially. Eccentric exercise is important for shock and absorbing.
- Patient can do resistance on bike, use a stepper machine, swim, use a cross-trainer and leg press.
- Walk on treadmill progress to jogging if pain free and good pattern.
- Lunges forwards
- Theraband resisted extension
- Strength should be 75% - 80% contra-lateral leg by week 16.
- At the end of this phase patients can start cutting, twisting and pivoting activities.
- Patients can use free weights after week 16.

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Insertion of the Protocol for the ACTIVE Trial (see table)

For use with Mr Pearse's and Mr Aslam's patients. Used with the consent of the Robert Jones and Agnes Hunt Hospital as guidelines and not to be used prescriptively. Guidance from Mr Pearse would be needed if the patient is NWB post- op

Mr Pearse's patients:

Follow the ACTIVE trial protocol however they are to be NWB for 6 weeks and fitted with a brace limiting flexion so as to avoid contact with the graft site. Ward staff will have to check with Mr Pearse post op where this is. The brace can be removed for unloaded through range passive flexion but is worn for 6 weeks.

Mr Docker's patients:

May use an exercise bike from 2 weeks if the contra lateral leg is the driving leg. Mini squats should not be done by Mr Docker's patients until 6 weeks then patients may exercise as tolerated.

Mr Aslam's patients:

Minimal weight bearing for 4 weeks then PWB to 6 weeks

From 6 weeks:

- Progression to FWB is allowed at six weeks followed by a gradual increase in exercise activity including elastic cord resistance exercises, cycling with load, cross trainer and eventually step-machines.
- Jogging can start at 3 months earliest if sufficient quads muscle control, unless specified against in op notes for longer duration please check with me as needed.
- Free weights and exercises severely loading the joint surfaces are started at 3 – 4 months when balance control is good, strength has returned and there is no swelling in the knee.
- No cutting, turning or jumping activities are allowed for 4 months and this may be longer for competitive or "heavy" patients.
- Return to impact sports is allowed between 4 – 6 months once knee function is satisfactory as measured on functional tests, and there is no swelling in response to activity.