

ORTHOARIZONA

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Hallux Rigidus Post-Operative Protocol (Cheilectomy with or without Moberg Proximal Phalanx Osteotomy)

A Cheilectomy procedure is performed to address Hallux Rigidus, which is a degeneration of the 1st MTP joint especially of the dorsal aspect of the joint. Large osteophytes can form which restrict dorsiflexion. Hallux Rigidus can range from small osteophytes with minimal arthritic changes of the joint to fairly severe arthritic changes widespread throughout the joint. The surgical procedure involves either through a medial or dorsal approach, an arthrotomy and extensive debridement and removal of osteophytes. It is crucial for the success of the procedure that the patient must regain their full dorsiflexion as soon as possible. At the time of the surgery they are placed in a compressive type soft dressing and allowed to partial weight bear or even full weight bear in a post operative shoe. As soon as the first postoperative check they are allowed aggressive range of motion without limitation. Particular attention to achieving dorsiflexion is crucial. Normal ambulation without compensation requires 65-70 degrees hallux dorsiflexion as measured through the 1st MTP joint. At approximately three to four weeks depending on pain and swelling the patient can discontinue the post operative shoe and begin regular shoe wear. Particular attention to a flexible sole shoe in order to promote Hallux range of motion at pushoff.

A Moberg Proximal Phalanx Osteotomy may be performed in conjunction with a Cheilectomy in order to attain a pseudodorsiflexion of the great toe by elevating the proximal phalanx. This helps achieve a more functional range of motion despite severe arthritis of the 1st MTP joint. Range of motion and progression of the protocol is determined by fixation type and bony healing restraints. It is imperative that the physical therapist consults the MD for limitations to the fixation site.

Physical Therapy: (7-10 days)

1. If a combination procedure is **not** performed, the patient is instructed in aggressive A/PROM with a goal of 70 degrees hallux dorsiflexion.
2. If an osteotomy is performed, the patient is instructed in A/PROM however they are instructed to avoid aggressive **passive** plantar flexion and dorsiflexion until 4-week follow-up.
3. Weight bearing per MD discretion based on surgical technique. Typically WBAT in post-operative shoe.
4. Early aggressive ROM, edema control, desensitization, forefoot and FHL mobilization. Wound healing is closely monitored and with medial approaches valgus/varus stresses are limited until 4 weeks s/p.
5. Entire Lower Extremity Biomechanical evaluation is performed with special emphasis on identifying and addressing areas that predisposed the patient to Hallux involvement. (LE flexibility, alignment, strength, shoe wear, training issues, etc.)

6. The patient is instructed in self-mobilization techniques as well as scar mobilization and desensitization. If osteotomy performed patient is to emphasis AROM times 4 weeks and then more aggressive PROM.
7. Physical Therapy is initiated 1-3 times per week. If significant limitations are present the patient is enrolled into a more formal Physical Therapy program.

Limitations warranting aggressive physical therapy:

- Hallux Dorsiflexion less than 50 degrees at 3-4 weeks s/p (goal 65-70 degrees).
- Hypersensitivity to the entire 1st ray or incision site.
- Significant 1st MTP effusion and/or pain

Nursing: (14-17 days)

1. The patient's wound is evaluated and sutures are removed.
2. X-rays are required only if combination procedure performed, i.e. Moberg/Akin Osteotomy or other bony procedure.

Nursing: (4 weeks)

1. Wound is re-evaluated and X-rays are required only if combination procedure performed, i.e. Moberg/Akin Osteotomy or other bony procedure.
2. Physician post-operative assessment.
3. Follow-up physician visit scheduled at 12 weeks s/p or sooner if complications arise.

Formal Physical Therapy Progression:

1. Progress ROM and strength as tolerated for Cheilectomy, if combination osteotomy is performed consult MD for healing limitations.
2. Progression to full weight bearing as pain and swelling allow. Emphasize correct gait pattern with special emphasis on push off.
3. Manual techniques/Joint mobilization techniques to the entire 1st ray in order to restore normal joint mechanics of the foot. (1st MTP, Sesamoids, Cuneiforms, Navicular and Subtalar). First ray must plantarflex and stabilize to ensure maximal hallux dorsiflexion at push-off. If medial approach protect capsular repair by avoiding varus/valgus stresses.
4. Static balance progression and proprioceptive training.
5. Ankle and Foot PRE's as tolerated. Theraband activities involving toe extensors/flexors.
6. Standing BAPS, Rocker board, Incline board, Prostretch devise involving Hallux dorsiflexion as symptoms allow.
7. Toe raises: bilateral and progression to unilateral as tolerated.
8. Gait training on treadmill: with and without shoes.
9. Dynamic balance progression and proprioceptive training while maintaining proper foot position.
10. Retro walking once normal painfree ambulation achieved.
11. Progression to walk/jog program (12 weeks) if full ROM, strength and normal gait pattern achieved. If osteotomy performed consult physician prior to jogging program.
12. Sport Performance and Speed and Agility Drills/Testing.