Physical Therapy Practice Guidelines for Persons with Bleeding Disorders:

Joint Bleeds

The following practice guidelines were developed through the consensus of the therapists that work with patients with bleeding disorders and edited by the National Hemophilia Foundation's Physical Therapy Working Group. The information contained in the practice guidelines is not intended in any way to be used as primary medical advice or to replace medical advice. They are intended to guide the physical therapist caring for individuals with bleeding disorders in the important factors and elements of quality care.

Signs and Symptoms

- Decreased ROM
- Pain
- Swelling/edema
- Heat/erythema
- Ecchymosis
- Muscle guarding of affected joint
- Muscle spasm
- Disuse of affected joint
- Gait deviations: decreased weight bearing, antalgic
- Decreased functional mobility/ activities of daily living
- Pediatrics: decline in developmental milestones/motor pattern (i.e. resort to crawling)

Differential Diagnosis

- Trauma: Fracture, Avulsion, Dislocation, Ligament Injury, Cartilage injury
- Synovitis
- Pseudotumor
- Bony or soft tissue tumor
- Cyst
- Sprain/strain
- Neuroma
- Internal derangement
- Infection (intra or extra-articular) Inflammatory arthritis
- Muscle bleeds
- Complex Regional Pain Syndrome
- Musculoskeletal ultrasound (if available) can be used to determine if a bleed, excess fluid, &/or if soft tissue proliferation is present in the joint space.

PT Interventions

Acute Stage: pain present at rest and with all activity

- Factor replacement per medical team orders (consider prophylaxis prior to PT)
- PRICE/POLICE* (ice for 10-20 minutes every 1-2 hours: see Cryotherapy Guidelines)
- Immobilize / Splint
- NWB with appropriate assistive device

Subacute Stage: Pain present with movement/activities; no pain at rest

- Factor replacement per medical team orders (consider prophylaxis prior to PT)
- Continue PRICE/POLICE prn for pain and after exertion Splinting, resting splint for protection at night, weaning splint as able with pain as guide
- Wean assistive device and begin progressive weight bearing
- Activity modification to avoid pain
- Pain-free gentle AROM of affected joint
- Pain-free progressive strengthening of affected and unaffected joint

Chronic Stage: pain not limiting ADLs

- Factor replacement per medical team orders (consider prophylaxis prior to PT)
- Dynamic splinting to increase ROM prn
- Progressive active/passive ROM to affected joint
- Progressive Strengthening: Open chain, closed chain, resistive band and proprioceptive training to affected joint
- Gentle joint mobilizations to increase ROM
- Modified functional activities and sports to avoid aggravation of symptoms
- Orthotics or possible casting for chronic issues
- Conditioning to address other areas of impairment
- Education regarding precautions to prevent re-injury/re-bleeds or injury to other joints

Other Treatment Considerations

- Patient/Family Education
- TENS
- Electrical Stimulation
- Relaxation Techniques for muscle guarding
- Kinesiology taping
- Cryotherapy (see Cryotherapy Guidelines)
- Elastic stockinette
- Joint support for return to sports
- Appropriate treatment if associated sprain/injury

- Myofascial release
- Further consultation with medical team
- Work with hematologist for adequate factor coverage
- Further imaging (plain radiographs to determine joint status, MRI to determine the presence of chronic synovitis)
- Treatment duration will vary based on individual needs and may require a longer duration than those identified for individuals without bleeding disorders.

Precautions/Contraindications

- Inhibitor patients: Please contact the physical therapist at your regional Hemophilia Treatment Center (HTC) for more information on these complex patients
- Avoid aggressive exercise and activity
- Safe progression of activity
- Monitor for nerve compression
- Use of heat modalities including ultrasound: refer to MASAC Guideline #130
- No return to sport/activity until pain-free full ROM and strength

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