



CLINICAL FINDINGS

- Sharp pain in the precise moment of injury
- Well-defined localized muscle pain
- Painful Strength Tests
- Painful Analytic Stretching Test
- Painful Daily Life Activities (variable)

IMAGING FINDINGS

- Evident fibre disruption <5cm¹
- High signal less than 50% of CSA¹
- Presence of Haematoma

¹ Pollock N. et al (2014) British athletics muscle injury classification: a new grading system. Br J Sports Med 48:1347-1351

0 to 3-5 days

RICE
Ice + Compression up to a maximum of 48h
Manual Therapy

PROGRESSION CRITERIA

- Pain-Free Daily Life Activities
- Decreased Inflammatory Signs
- Able to recruit the muscle without pain

3-5 to 9-11 days

Diathermy/Microcurrent
Manual Therapy
Low load eccentric contractions in inner/intermediate ROM
Activation functional exercises - 2:1 work/rest days ratio
Movement pattern/Postural correction
Aerobic Conditioning
From unloaded (pool) to loaded activities (e.g. Walking to Running in Alter G)

PROGRESSION CRITERIA

- Negative Resistance Test
- Negative Passive Test
- Pain-Free Palpation
- Full ROM

9-11 to 13-15 days

Diathermy/Microcurrent
Manual Therapy
Progress in Strength Training -> Max. Strength
1:2 work/rest+activation days ratio
Focus on eccentric phase (eccentric overload only after decreased proliferation phase on US imaging)
Movement pattern/Postural Correction
Motor Control enhancement
Progress in Functional Training - start Field Technical drills

PROGRESSION CRITERIA

- No Pain or discomfort during training
- Absence of US imaging complications of muscle healing
- No major maximal muscle strength deficit or ratio imbalance on Isokinetic Dynamometer or Hand-held Dynamometer ≤20%

13-15 to 21 days

Manual Therapy
Maximal and Power Strength Training
Movement pattern/Postural correction
Motor Control enhancement
In-Field rehabilitation w/ strength and/or resistance drills
Load/Targets according to individual players' GPS Data Profile

PROGRESSION CRITERIA

- No Pain or discomfort during training
- No differences in Maximal Strength Tests between sides and agonist/antagonist ratios ≤10%
- No differences in Power Tests between lower limbs ≤10%
- Achieved Previous Weekly Load GPS Data
- Achieved Previous Maximum Speed

TEAM TRAINING

- Monitoring Training Load with GPS
- Gym routine to maintain strength, flexibility and motor control levels
- Maintain Movement pattern/Postural correction approach