

Patellofemoral Pain Syndrome

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inspired by aspire*

Introduction

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Diagnosis of specific cause of pain is difficult

Assessment is required for:

- Knee and hip strength
- ROM
- Lower limb malalignments
- Patella Tracking and mobility

Treatment usually conservative with (McCarthy MM, Curr Rev Musculoskelet Med 2013)

- NSAIDs
- Activity modification
- Physical Therapy treatment focusing on Strengthening and flexibility

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- Anterior knee pain is present in
 - up to 25 % athletes in female basketball
 - The most common in runners! 16% (62% women)
 - 25% of all knee injuries
 - **OVERUSE INJURY!** (Earl JE et al, Am J Sports Med 2011)
 - Good scientific evidence association of PFPS and
 - patellar alignment and mechanics
 - Hip strength and mechanics
 (Davis IS et al, J Orthop Sports Phys Ther 2010)

Don't forget to address all these risk factors

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- Weakness of quads
 - Tightness of hamstring
 - Tightness of ITB
 - Tightness of gluteus complex
 - Hip muscles dysfunction
 - Excessive foot pronation
 - Generalized Joint Laxity
 - Leg length discrepancy
 - Patellar malalignment
 - Patellar hypermobility
- (Halabchi et al, Asian J Sports Med 2013)

Metanalysis Fyre JL et al, SportsHealth 2012

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- Exercise is prescribed to address deficits in muscular functions, mainly quadriceps and hip abductors
- Exercise and rest may not address any of the etiologies
- Exercise is the most effective treatment for immediate decrease in pain and increase in function.
- Significant improvement in pain and increased function (LysoIm scale scores)
 - Single leg exercises such as leg press
 - Exercise prescriptions that include flexibility, strength and muscle balance (quadriceps, adductor and gluteals)

Metanalysis Fyre JL et al, SportsHealth 2012

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- Both Open & closed kinetic chain statistically improved Kujala function score
- Results suggest that adding transverse abdominis, hip abductor and lateral rotator muscles may improve pain income
- Whilst exercise is preferred to increase function and decreased pain, the best exercise to perform cannot be detail.

Metanalysis Fyre JL et al, SportsHealth 2012

- Twelve-months follow up of patients who initially improve show no differences vs control group.
- Improvements may not be maintained after short-term follow-up. Effects of exercise programs can be lost as soon as 3 months after.

Fukuda TY et al,

J Orthop Sports Phys Ther 2010

- Hip extensors contribute 25% of energy absorption during landing
- If hip muscles are not strong enough the load is transmitted particularly to the knee.
- Patients that included hip strengthening exercises in a rehabilitation program has significantly higher improved outcomes for pain relief descending stairs.

Earl JE et al, Am J Sports Med 2011

- 8 week rehab program with emphasis on strength and neuromuscular control of hip and core reduces knee abduction moment, improves core and hip strength and results in improvements in knee pain and function

McCarthy MM et al,

Curr Rev Musculoskelet Med 2013

- Non-operative treatment should be pursued for at least 3 months.
- Although surgery is rarely utilized, it should be considered in a compliant patient who has not responded well to rehab.

Conclusions

- Overuse
- Multifactorial
- Rehab course 3 months
- Focus on knee, hip, core muscles strengthening and flexibility
- Correction of other factors

**THANK YOU, MERÇI
SHUKRAM, GRACIAS**