

Groin pain syndrome

Parisa Nejati

Associate professor of sports medicine

Iran University of Medical Sciences

اولین کنگره بین المللی
فوتبال کلینیک

۲۰ الی ۲۲ آبان ۱۳۹۶

11-13 Nov 2017
1st International
Football Clinic
Congress



Conservative treatment

- A big challenge
- The aim of multidisciplinary conservative treatment
- Postural impairment and muscular imbalance
- Evaluation of hip muscle strength and length

*Valent A, Frizziero A, Bressan S, et al. Insertional tendinopathy of the adductors and rectus abdominis in athletes: a review. *Muscles Ligaments Tendon J.* 2012;2:142–8.

Acute groin injury

1. acute/subacute phase
2. conditioning phase
3. sports-specific phase
4. return-to-sport phase.

Acute phase

Pain and inflammation control

Analgesics(NSAIDs??, Corticosteroids??)

PRP??? (PMCID: PMC3666502)

Normalization of flexibility

Preventing excessive muscular inhibition

Criteria for progression to conditioning phase

no or minimal pain during isometric exercises

Active hip abduction at least 50% of the normal side

Conditioning phase

Tissue repair and regeneration

-progressive loading of adductors, hip flexors and abdominal muscles(**isometric** ,**concentric and eccentric**)

Pain > 3 on VAS , morning stiffness and pain = exercises have been progressed quickly

Walking: when he is pain free

Running:

pain free walking

pain free resisted hip adduction(squeeze)

minimal adductor guarding

Criteria for progress to sports specific phase

No or minimal pain on exercise phase 2

Sports specific phase

Restoration of muscular endurance and strength, aerobic and anaerobic capacity and coordination/ balance

Running 50-100 m with 5-10 m acceleration deceleration(6-8 rep/ every other day)

Lateral running(above running is pain free and hip flexion test is pain free and no muscle guarding, pain free squeeze test)

Copenhagen hip adductor exercise(in 3 levels, 5, 10 and 15 reps.)

Criteria for progress to return to play

No or minimal pain with all exercises

Active ROM 100% of normal side , strength 80% of normal side

Able to do 3* 10 RM of every resistance of non injured side

Able to do 3* 10 RM of hip adductors at least 5 kg/ hip flexors /abdominal curl on Swiss ball without pain

Return to sport phase

Dynamic muscle exercises by elastic band
(8-10 RM)

Copenhagen at level 3 and sliding board

Specific sport from 30 min to 90 min

Excessive loading

Painful passive hip abduction

Adductor muscle guarding

Pain and weakness with resisted adduction
and squeeze test

Manual therapy

- exercise therapy has not given a satisfactory result.
- Low motivation to perform exercise therapy for the



(a)



(b)



(c)

Source: Peter Brukner: *Brukner & Khan's Clinical Sports Medicine: Injuries*, Volume 1, 5e: www.csm.mhmedical.com
Copyright © McGraw-Hill Education. All rights reserved.

Adductor related groin pain

Professor Per Hölmich

8-12 weeks.

First 2 weeks: 3 days a week, pain reduction(rest, analgesic, modified weight bearing, ice and thermotherapy,...) + specific isometric and dynamic exercises to reactivate the adductor muscles.

The second week to 12th week: heavier resistance training as well as challenging balance and coordination exercises(The exercise program is performed three times a week alternating with the exercises from module 1 on the days in between.

Dynamic: 5 set 10 rep



(a)



(b)



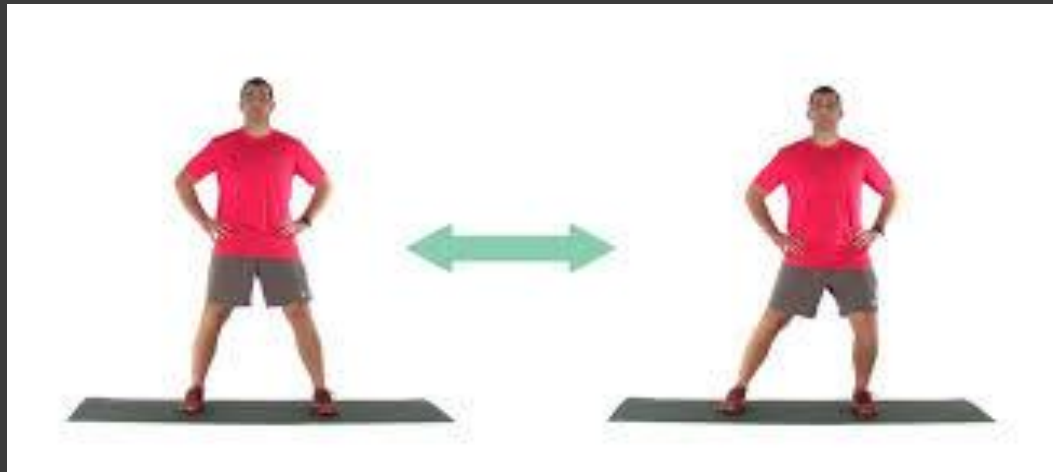
(c)



(d)

@ifmarc www.ifmarc.ir 44738641

are performed continuously for 1 minute with each leg in turn.

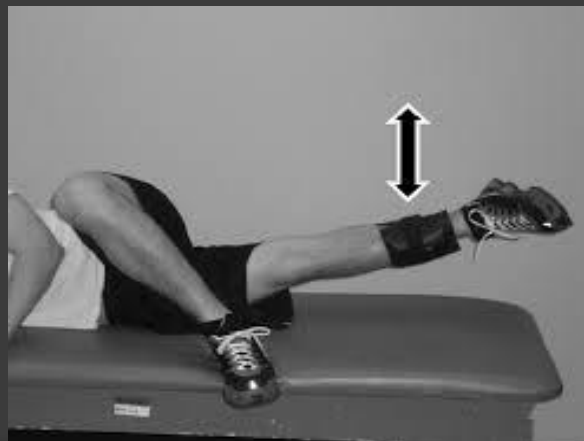
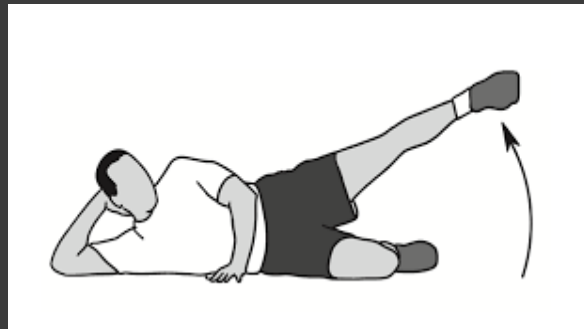




(a)



(b)



Source: Peter Brukner: Brukner & Khan's Clinical Sports Medicine: Injuries, Volume 1, 5e: www.csm.mhmedical.com Copyright © McGraw-Hill Education. All rights reserved.

Patients often make good progress in the first few weeks, **but symptoms can plateau** from that period until the 6–9 week period,

Pain (no), soreness(yes)

Pain medication including NSAIDs should be avoided.

Athletes should continue with some of the exercises on a regular basis (**1–2 times a week**) for **at least a year** after total recovery and return to sport.

Stationary cycling and general fitness training not involving the adductors can be allowed if pain-free

Jogging is allowed **after 6 weeks** as long as it does not provoke any groin pain. (able to jog without pain, the treatment program is completed and the athlete is allowed to gradually progress to demanding sports-specific training followed by sports participation).

Stretching

No stretching of the adductor muscles should be done during this 2–3 month but stretching of the other lower extremity muscles, particularly the iliopsoas, is recommended.

Corticosteroid injection

Is not recommended

no documented long-term beneficial effect

more difficult to monitor the training program.

Copenhagen



(a)



(b)

Source: Peter Brukner: *Brukner & Khan's Clinical Sports Medicine: Injuries*,
Volume 1, 5e: www.csm.mhmedical.com
Copyright © McGraw-Hill Education. All rights reserved.

abdominal related groin pain

the presence of **pain on palpation of the abdominal muscle insertion** together with pain on abdominal flexion against resistance.

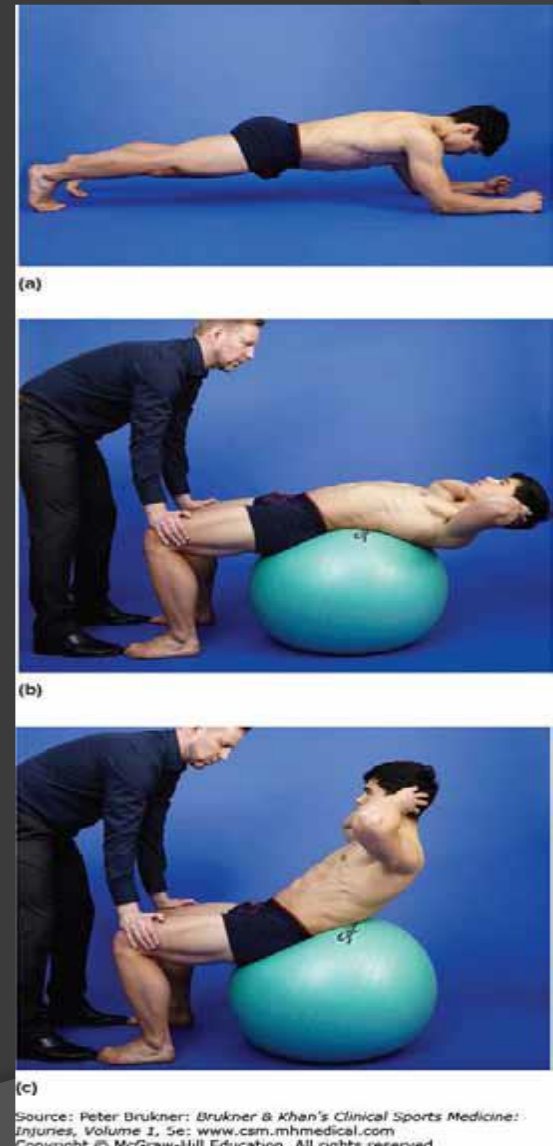
Eleven of the 58 entities (19%) were abdominal-related and in 9 of the 11 cases this coexisted with the presence of adductor-related groin pain.

Treatment

8–12 weeks

strengthen the abdominal muscles (isometric, concentric and eccentric), in combination with a series of adductor and abductor-strengthening exercises, pelvic stabilisation and balance exercises.

The abdominal exercises used in the adductor program ----- progressing into more strenuous exercises for the abdominal wall through plank exercises ----- Swiss ball can also be used in the late stage



Iliopsoas related groin pain

Iliopsoas muscle strengthening (isometric, concentric and eccentric) , **pelvic stabilization and balance exercises.**

Stretching exercise and trigger point stimulation.

Corticosteroid injection if the strength training is not progressing satisfactory.

Partial release of tendon insertion(occasionally)

Pubic related groin pain

Unloading the lower extremity and gradually increasing load again over a period of 3-4 months from rest from all weight bearing running activities for 12 weeks.

Inguinal related groin pain

Diagnostic criteria

pain in inguinal canal region and **tenderness** of the inguinal canal ,**no palpable inguinal hernia** is present

more likely if **aggravated with abdominal resistance** or Valsalva/cough/sneeze.

Bulging of the posterior wall, bulging causing entrapment neuropathy, tendinopathy of the inguinal ligament, tears of the external oblique aponeurosis and tearing of the conjoined tendon have all be proposed as being 'the pathology' underlying the problem.

Surgery

If conservative measures have failed for at least 3 months

Or

in case of inguinal hernia or sports hernia

Post surgical rehabilitation

Brunt and Barile protocol includes abdominal and lower body strengthening and flexibility and stabilization and balance

5 phases, 5 weeks

1-Walking in short distance and pain reduction{ 30 min walking= light hamstring calf and quadriceps stretching)

2- active hip ROM, walking on incline treadmill , backward walking and bike, wall sit by Swiss ball , abdominal drawing in

3- scar mobilization and monitored sport specific skill activities, dribbling , ball hitting progression and skating.

4- increased strength, weight and stabilization

5- proper length and abdominal strength are maintained + core stabilization program