ISSN 0008-3194 (p)/ISSN 1715-6181 (e)/2016/164–174/$2.00/©JCCA 2016

Conservative management of posterior ankle impingement: a case report

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Objective: *To describe the pain and functional improvements of a patient with posterior ankle impingement following a treatment plan incorporating soft tissue therapy, chiropractic adjustment and a progressive rehabilitation program.*

Clinical Features: *A 37-year- old male presented with posterolateral ankle pain exacerbated by plantar flexion two weeks after sustaining an inversion ankle sprain. Oedema was present and the patient was describing a sensation of instability while walking. The initial diagnosis of lateral ankle sprain was found to be complicated by a posterior ankle impingement caused by a tenosynovitis of the flexor hallucis longus sheath suspected during the physical examination and confirmed by MRI.*

Objectif : *Présenter l'histoire de cas, notamment la progression de la douleur et le retour aux activités fonctionnelles, chez un patient présentant un accrochage postérieur de la cheville. L'article présente ces données en lien avec un plan de traitement incorporant le traitement des tissus mous, l'ajustement chiropratique et un programme de réadaptation progressive.*

Caractéristiques cliniques : *Un homme âgé de 37 ans présentant une douleur à la cheville postéro-latérale exacerbée par une flexion plantaire deux semaines après avoir subi une entorse de la cheville en inversion. Le patient souffrait d'un œdème et se plaignait d'une sensation d'instabilité lorsqu'il marchait. Le diagnostic initial d'une entorse de la cheville en inversion a été modifié suite à l'examen physique. L'entorse est compliquée par un accrochage postérieur de la cheville relié à une ténosynovite de la gaine du muscle long fléchisseur de l'hallux. Cette trouvaille mise en évidence à l'examen physique fut confirmée par une IRM.*

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Disclaimers: None
Sources of funding: None
Patient consent was obtained for the use of clinical information and imaging with respect to this case report.

Intervention and Outcome: *The patient was treated over a 14-week period. Soft tissue therapy, a rehabilitation program and cortisone injection were used to treat this condition. A precise description of the rehabilitation program that contains open kinetic chain, closed kinetic chain, proprioception, and conditioning exercises prescribed to the patient is given. After the treatment plan, the patient returned to play pain free and had no daily living restrictions.*

Summary: *A protocol including rest, soft tissue therapy, open and closed kinetic chain exercises, sport-specific exercises and cortisone injection appeared to facilitate complete recovery of this patient's posterior ankle impingement.*

(JCCA. 2016;60(2):164-174)

KEY WORDS: chiropractic, ankle, posterior impingement

Intervention et résultats : *Le patient a été traité pendant une période de 14 semaines. Le traitement des tissus mous, un programme de réadaptation et l'injection de cortisone ont été utilisés pour traiter cette condition. Une description précise du programme de réadaptation (exercices cinétiques en chaîne ouverte et fermée, exercices proprioceptifs ainsi que de conditionnement physique), est présentée. Après le traitement, le patient est retourné au jeu sans douleur et sans aucune contrainte dans ses activités quotidiennes.*

Résumé : *Un protocole comprenant du repos, le traitement des tissus mous, des exercices cinétiques en chaîne ouverte et fermée, des exercices particuliers pour la discipline sportive et l'injection de cortisone semble avoir facilité une guérison complète de l'accrochage postérieur de la cheville de ce patient.*

(JCCA. 2016;60(2):164-174)

MOTS CLÉS : chiropratique, cheville, coincement postérieur

Introduction

Ankle sprains are one of the most common sports-related injuries.[1,2] Although most inversion ankle sprains resolve completely, chronic residual ankle symptoms such as pain, swelling, giving-way sensation and limited range of motion may continue to persist chronically in approximately 10% of the cases.[3] Differential diagnoses of chronic ankle pain should include osteochondral injury, instability, malunion/non-union/stress fracture, bone bruise, osteoarthritis, tarsal tunnel syndrome and impingement syndromes.[4,5] Impingement syndromes are defined as painful mechanical limitation of full ankle range of motion due to the entrapment of an osseous or soft-tissue abnormality.[6] Different types of impingement can occur in the ankle; classification is dependent on anatomical location at the ankle joint. The two main types are anterior and posterior impingement. From those types, subcategories can be made: anterior, anterolateral, anteromedial, posterior and posteromedial impingement.[6]

Posterior impingement is the result of compression of the talus and surrounding soft tissues between the tibia and the posterior aspect of the calcaneus. This occurs mainly with repeated or forced plantarflexion of the ankle.[4,6] It is most commonly seen in ballet dancers[7,8], soccer players[7,9], jumping athletes[10], downhill runners[7] and kicking athletes[7,9]. The repetitive plantarflexion motion of the ankle during sport and the increased stresses placed on the posterior aspect of the ankle are believed to be the causes of impingement syndrome.[7] Further, it often occurs as the consequence of an acute injury such as an ankle sprain or a fracture and subsequent repetitive stress. Occasionally, abnormal structures such as an os trigonum can increase the risk of developing symptoms of posterior ankle impingement.[11]

This article presents a case of posterior ankle impingement of a 37-year old recreational level athlete where a rehabilitation protocol was used for the conservative management. The patient consented to release all information in regards to his case for publication.

Case Presentation

A 37-year-old physically active male presented with a two-week history of left lateral ankle pain. The patient attributed this injury to spraining his ankle playing dek hockey (five versus five hockey with boards, played on foot). The mechanism of injury of the original ankle injury was a trip and fall while running forward creating a hyper-plantarflexion and inversion injury of the left ankle. The patient was unable to finish the game due to an inability to weight bear on the left ankle. Pain was originally located at the anterolateral aspect of the left lateral malleolus, but slowly shifted to the posterolateral aspect of the same malleolus over the following month. Weight bearing reportedly increased the pain to an 8/10 on the numeric pain rating scale (NPRS). No immobilization period occurred as the patient did not seek treatment initially. Prior to this incident, the patient reported playing dek hockey five times per week year round.

At the time of initial visit, the patient reported a sharp pain at the anterolateral and posterolateral aspect of his left ankle while walking. Weight bearing activity reportedly elicited pain that was rated 6/10 in intensity on the NPRS. The patient reported no previous history of foot or ankle trauma, did not report the use of any medications or neutraceuticals at the time of injury, and was a non-smoker and non-drinker. The patient was employed as a worker in a baseball bat factory, which required long hours of standing. Abstaining from weight bearing in the 48-hour period following the injury was not possible due to his work requirements. There were no constitutional signs or symptoms and a systems review was unremarkable.

Visual inspection showed residual oedema around the left lateral malleolus. During gait analysis, a limp was found caused by the left ankle; the patient would decrease time spent in the left stance phase and left plantar flexion motion was decreased during push-off. A bilateral lower extremities neurological examination was performed and was unremarkable (motor strength, L4-S1 reflexes and sensory testing). A lower extremity peripheral vascular examination was unremarkable (normal pedal and tibialis posterior pulses and normal venous return). There was pain on palpation on both sides of the Achilles tendon as well as over the anterior talofibular and calcaneofibular ligaments. Further, pain was elicited at the anterior talocrural joint line. Muscle palpation revealed tenderness of the left flexor hallucis longus, gastrocnemius and tibialis posterior. Active and passive ankle range of motion were actively and passively decreased in plantarflexion and dorsiflexion on the left side compared to right. Passive hyper-plantarflexion provoked pain at the posterolateral aspect of the ankle. The patient could not keep a steady balance with left unipedal stance and demonstrated an increase of upper body sway. Orthopedic examination was negative for the following tests on the left side: squeeze test, anterior and posterior drawer test and dorsiflexion/compression test. The hyperplantarflexion test was positive, provoking pain at the posterior aspect of the left ankle (Figure 1). A diagnosis of grade two lateral left ankle sprain with a possible posterior ankle impingement syndrome (PAIS) was made after the initial visit to the chiropractor. Differential diagnosis included osteochondral lesion, fracture and retrocalcaneal bursitis.

Figure 1.
The hyperplantarflexion test consists of forcing the foot into maximal plantarflexion. If there is a presence of a bony structure or soft tissue in the posterior aspect of the ankle, it can impact between the tibia and the calcaneus, leading to a sharp pain.

Intervention and outcome

Treatment commenced two weeks after the initial injury occurred and included soft tissue therapy (Active Release Technique® and instrument assisted soft tissue mobilization) on the gastrocnemius, soleus, flexor digitorum longus, flexor hallucis longus, tibialis posterior, tibialis anterior and fibularis muscles, as well as a plan of rehabilitation exercises. High velocity mobilizations of the talocrural and tibiotalar joints were avoided for the first month of treatment as pain provocation was elicited. The

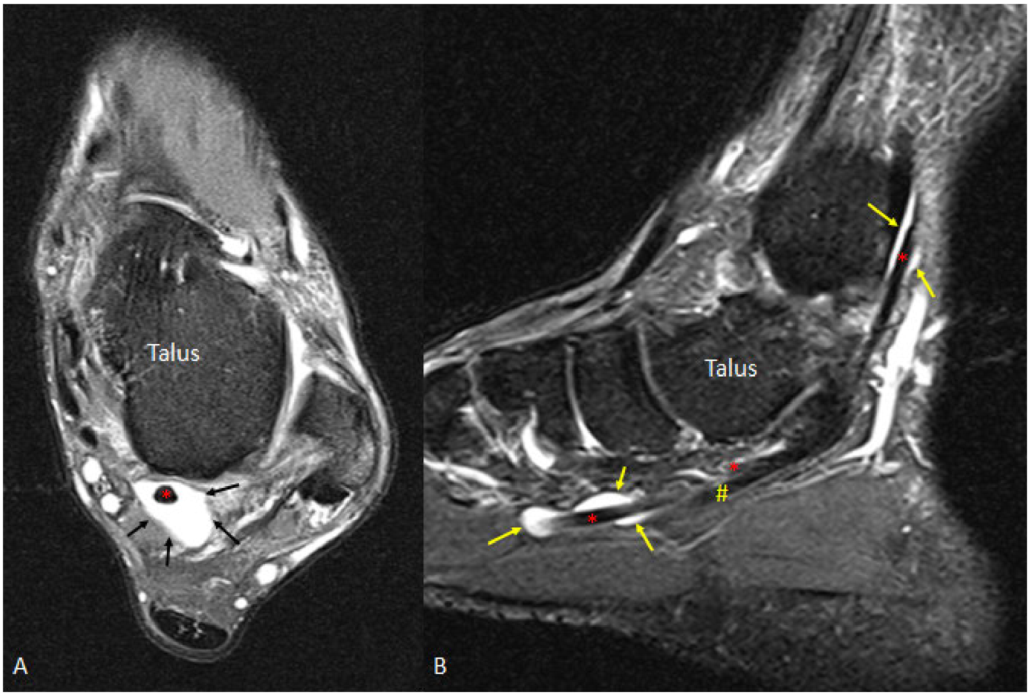


Figure 2.
MRI images of the left ankle and hindfoot. A: Axial proton density, fat-saturated TSE image (TR 3460, TE 32). B: Sagittal fat-saturated T2-weighted image (TR 4000, TE 30). On both images, the red asterisk (*) indicate the flexor hallucis longus tendon surrounded by a large area of hyperintense signal (yellow arrows) representing fluid in the tendon sheet. The FHL tendon itself is normal and demonstrates low signal intensity on all sequences. The flexor digitorum longus tendon is identified by the yellow number sign (#).

primary goal of conservative management was to restore range of motion and strength through a rehabilitation program. The frequency of care was once per week for three weeks and a reassessment would occur after such time.

Tables 1 through 4 provide an overview of the patient's progression through a plan of rehabilitation exercises. Non-weight bearing open kinetic chain exercises were followed by closed kinetic chain exercises. The goal of this progression was to improve static stabilization of the affected ankle. Dynamic stabilization was later implemented to optimise dynamic ankle stability to prevent recurrence of injury.[12,13] We monitored the patient's progression with short video recordings of functional tasks (static unipedal stance, different landings and agility maneuvers).

The rehabilitation program started with non weight bearing exercises and progressed to balance as well as isometric strengthening exercises. During phase 2 of the rehabilitation program (Table 2), the clinician reassessed the patient's condition. Progression had been made in regards to range of motion and pain. However, the patient still perceived pain of 4/10 intensity during passive plantarflexion and had pain on both sides of the Achilles tendon during weight bearing and palpation. He was still unable to run due to pain. The patient was sent for an MRI of his left ankle (Figure 2). Signs of inflammation in the flexor hallucis longus sheath and osteochondral lesions of the anterior talar dome were viewed on the MRI. Based on those results and the case presentation indicating posterior ankle pain, a diagnosis of posterior ankle impingement caused by tenosynovitis of the flexor hallucis longus (FHL) sheath was confirmed. During the intervention period, treatment was focused on the diagnosis of PAIS, however the practitioner kept in mind the presence of osteochondral lesions of the anterior talar dome. Following this new diagnosis, the patient was seen for treatment once every two weeks for ten weeks.

While working through the rehabilitation program (end of phase 2b in Table 2), an ultrasound of the patient's left ankle was performed. Pain was still elicited in plantarflexion and was graded as 4/10 on the NPRS, the ultrasound was prescribed to evaluate the posterior structures of his left ankle. An intraarticular hyperechogenic mass with a bony appearance measuring 0.6 x 0.4 cm was found in the retrocalcaneal region. Synovitis surrounding the bony fragment and the flexor hallucis longus was also viewed

Table 1.
Phase 1 of the rehabilitation program and patient progression: inflammation reduction.

Timeline	Goal	Exercises description	Pictures
Phase 1 Weeks 1-2	• Oedema control • Pain free ROM (avoidance of plantar flexion: neutral ankle position) • Return to activities of daily living	Open kinetic chain (OKC): • ABC's with injured ankle (in the air) • Progression to ABC's with thera-band (resistance in 4 directions; inversion, eversion, flexion, extension) Closed kinetic chain (CKC) • Bipedal isometric holds: forefoot on a step (5x10sec to 10x10sec to 5x 30 sec to 3x 1 min) • Bipedal ½ squat (60 degrees, 4x5 squats to 4x15) • Balance on a dynadisc (bipedal) alternate eyes opened/ closed, 3x 1 min *complete plantarflexion was avoided until phase 3	Bipedal isometric hold 
Patient progression	• No oedema • Orthopedic testing: all negative (except for posterior impingement during hyperplantarflexion) • ROM pain free, except active and passive plantarflexion (NPRS score: 6/10)		

on the ultrasound. This bony fragment could correspond to an os trigonum. Interestingly, this bony structure was not identified on the prior MRI. Following the results of the ultrasound, the patient received an ultrasound guided Triamcinolone (synthetic glucocorticoid corticosteroid) injection in the retrocalcaneal region of the ankle where the bony fragment was found. The NPRS pain score went from 4/10 prior to injection to 2/10 after the injection during hyperplantar flexion. The decrease of pain allowed the patient to progress through the rehabilitation program. Plyometric exercises were then introduced into the rehabilitation program.

To the author's knowledge, there are no return to play guidelines for PAIS in the current body of literature. In this case, the return to play protocol was based on literature regarding return to play in athletes following ankle injuries and ankle sprain.[14-15] After regaining pain free range of motion of the left ankle, normal strength and normal ankle stability, the patient went over a sport specific rehabilitation program (Table 3). The patient returned progressively to dek hockey by the end of phase four of the rehabilitation program. At that time, the clinician evaluated that the patient was ready to go back to play as he could run, land, cut and turn on the affected ankle without any pain and felt mentally ready.

Discussion

There are several described etiologies for PAIS. These etiologies include soft tissues or bony structures between the distal aspect of the tibia and the superior aspect of the calcaneus.[4,6,16] Examples of structures that can be compressed and can cause the development of symptoms are: an os trigonum[17], a prominent posterolateral process of the talus[4], an enlarged posterior process of the calcaneus[7], the posterior intermalleolar ligament[18], soft-tissue impingement[19], anomalous muscles[20], loose bodies, fractures of the ossicle or talar process, calcified inflammatory tissue, a low-lying flexor hallucis longus muscle belly and thickening of the capsule[7,8]. Other contributing factors for the development of the condition should also be considered even if they are not currently evidence based: inadequate rehabilitation following previous ankle injury,

Table 2.
Phase 2 of the rehabilitation program and patient progression: stability improvement.

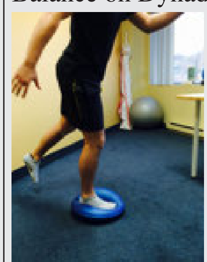
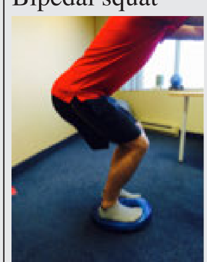
Timeline	Goal	Exercises description	Pictures
Phase 2a Weeks 3-4	• Improvement of static ankle stability • Improvement of dynamic ankle stability • Partial ankle dorsiflexion was begun (5 degree)	<u>CKC:</u> • Unipedal isometric holds (5x10sec to 10x10sec) • Alternate bipedal and unipedal squat/ stable surface (60 degrees, 4x5 sec to 4x15 sec) • Balance on a dynadisc (injured ankle) alternate eyes open / eyes closed, 3x1min	Unipedal isometric hold  Balance on Dynadisc 
Patient progression	• ROM pain free, except passive plantarflexion (NPRS: 4/10) • Unable to run • MRI confirmed diagnosis of posterior ankle impingement caused by tenosynovitis of FHL sheath		
Phase 2b Weeks 5-6	• Improvement of static ankle stability • Improvement of dynamic ankle stability	<u>CKC:</u> • Lunge (injured side static on the ground) Multiple directions (front, side, back) 2x (4x each direction) • Bipedal Squat on dynadisc • Bilateral Lunge (eyes open / eyes closed) Progression from (2x 10 eyes opened and 1x10 eyes closed) to (3x10 eyes closed)	Bipedal squat  Lunge /multiple directions 
Patient progression	• Pain with passive plantar flexion at end range only (NPRS score: 4/10) • Subjective improvement in ankle stability (unipedal stance, video analysis) • Patient was able to do all exercises without discomfort and pain		

Table 3.
Phase 3 of the rehabilitation program and patient progression: increasing load and movement.

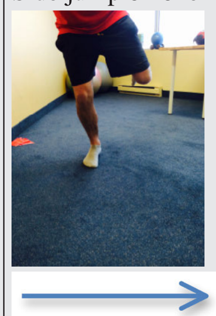
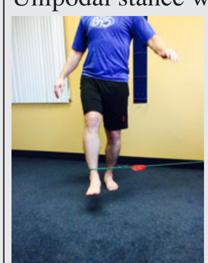
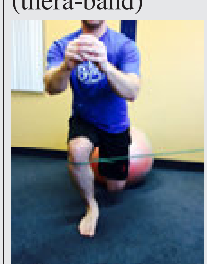
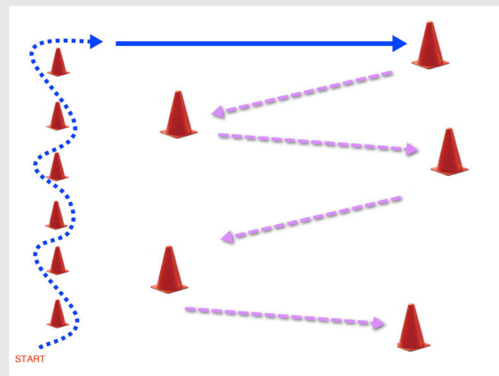
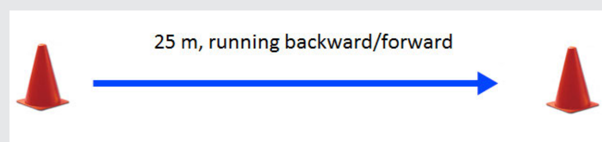
Timeline	Goal	Exercises description	Pictures
Phase 3 Weeks 7-10	• Increasing ankle load tolerance • Progression to 10° of ankle dorsiflexion • Introduction to plyometrics	<u>CKC with dynamic stabilization:</u> • 2 legged front jump ⟶ Landing on one leg (2 x 1 min) • 2 legged jump ⟶ 90° turn in the air ⟶ Landing on 1 leg (both sides) (2x 1 min) • Front Jump on 1 leg (2x10 rep) • Side jump on 1 leg (2x10 each leg) • Rope jumping (5x 1 min) • Walk/run intervals on treadmill (alternate one day : rope jump, other day running program) total : 4 days/ week • Side step up and down (3x 1min)	Side jump on one leg  Side step up and down 
		<u>CKC:</u> • Unipedal stance with other leg thera-band swings (multiple destabilisations with thera band swings, 4x 1min) • Lunge with isometric abduction (thera-band) (3x8 each leg, thera band always on the forward leg)	Unipodal stance with theraband  Lunge with isometric abduction (thera-band) 
Treatment + patient progression	• Ultrasound-guided cortisone injection • No pain with CKC / plyometrics and landing exercises		

Table 4.
Phase 4 of the rehabilitation program and patient progression: return-to-play.

Timeline	**Goal**	**Exercises description**	**Pictures**
Phase 4 Weeks 11-14	• Sport-specific exercises • Return-to-play	• Running patterns with acceleration/deceleration (minimum: 2x 10 runs) • Cut and turns (minimum 2x5 each direction) • Forward and backward running (minimum 2x5 repetitions each direction) • Exercises above: 3x/ week (20 min duration) • Rope jumping program continued between running exercises every other day (20 minutes duration)	Cut and turns circuit example  Forward and backward running 
Patient progression	• Pain free sport specific exercises (running, jumping, quick turn) • Plantar flexion pain free (NPRS: 0/10) • Return to play		

inappropriate technique in sport, inadequate equipment, lower limb kinematic chain dysfunctions and poor proprioception.[21,22] A group of experts stated that those factors combined with the presence of a bony or soft tissue structure located between the calcaneus and the tibia can lead to a PAIS in professional ballet dancers.[20] Symptoms can also develop four to six weeks after an ankle injury. This presentation proposes the hypothesis that the acute injury leads to intraarticular hemarthrosis and FHL sheath inflammation as well as further capsular lesion, at first subclinical. As the initial anterolateral symptoms, such as bruising and swelling settle, the athlete starts feeling pain at the posterolateral aspect of the ankle as he or she tries to sprint, push off and change direction.[9] This post injury apparition of PAIS was studied on soccer players, but a similar mechanism seemed to have happened in our case study.[9]

There is a paucity of evidence on the prevalence and natural history of the various conditions contributing to PAIS.[22] One study revealed a one-year prevalence of 6.5% in a group of 186 trained ballet dancers.[23] However, there are no longer-term prospective studies conducted on the general population or following any sporting organizations that have published upon the prevalence of PAIS and response to conservative treatment.[22]

An os trigonum is a small bony ossicle located posterior to the talus. It is formed from a separate ossification center that fuses with the talus between the ages of seven and thirteen years.[24] In most individuals, this small bone fuses to the talus to compose the posterolateral process of the talus. However, this fusion fails to occur in up to 14% of the population. The prevalence of an os trigonum bilaterally is approximately 50% when one is present.[11] An os trigonum is usually asymptomatic, but trauma or repeated plantarflexion motions can create inflammation and trigger the symptoms. The pain is caused by abnormal movements between the os trigonum and talus or calcaneus or compression of thickened joint capsules and/or scar tissues at the talocrural joint.[8,16] A bony fragment was identified by ultrasound imaging in the present patient's left ankle and could potentially be referred to as an os trigonum, which is a risk factor for developing a PAIS.

PAIS is characterized by pain lateral or medial to the Achilles tendon with repetitive or forced plantarflexion. Clinical presentation of PAIS may be either due to trauma, such as an ankle sprain illustrated in the case above, or as a result of overuse.[16] Common signs and symptoms include recurrent swelling and pain that is aggravated by activities requiring plantarflexion and ankle mobility.[25] During physical examination, patients may report pain in plantarflexion and in hyperdorsiflexion from the posterior structures, such as the flexor hallucis longus tendon and the capsule being stretched.[6] Both of those actions triggered the pain while the present patient was playing dek hockey. Sensation of blocking in plantar flexion can also sometimes be felt. The examiner can occasionally palpate thickening of the posterior soft tissues.[20]

Imaging can be helpful in confirming the diagnosis of PAIS or excluding other plausible posterior ankle conditions such as; Achilles tendinopathy, tarsal tunnel syndrome, osteochondral lesion, talocrural osteoarthritis and syndesmosis rupture that can often mimic PAIS.[25] Radiographs, especially the lateral view, are valuable for diagnosis of the bony impingement such as a loose body or trigonal process. Further imaging such as ultrasound, CT scan and MRI can also be useful. To date, MRI is considered as the technique of choice to evaluate PAIS.[26] In this case, no radiograph was taken at the beginning of the treatment. The patient was referred to his general practitioner for advanced imaging. An MRI of his ankle was conducted due to ongoing pain.

An interesting fact in this case is that a bony fragment was seen on the ultrasound, but not on the MRI. Since the ultrasound results can be operator dependent and, as mentioned previously, the MRI is the technique of choice to evaluate PAIS, and tenosynovitis of the FHL sheath was also found on the ultrasound, we did not change our initial diagnosis of posterior ankle impingement caused by tenosynovitis of the FHL sheath. However, the presence of an os trigonum might be a contributing factor in the patient's pain and dysfunction in this case. Further investigations could have been done to find the exact cause of the impingement. However, this would not have affected the management in this case.

Treatment for PAIS varies depending of the cause of the impingement. Currently the literature is lacking good quality outcome studies investigating the optimal treatment of ankle impingement. However, in a study by Hedrick et al, non-operative treatment consisting of physical therapy and rehabilitation was shown to be successful in approximately 60% of patients with posterior ankle impingement.[7] The treatment consisted of ice, rest, anti-inflammatory medications and avoidance of forced plantarflexion for all patients and cortisone injection for patients presenting with higher levels of pain. As the pain decreased, patients followed a physiotherapy program that included phonophoresis, isometric exercises, Achilles tendon stretching, and selected isometric strengthening.[7]

A literature review on conservative treatment of the PAIS in professional ballet dancers and expert consensus by Soler et al., suggested that initial treatment of the PAIS should focus on decreasing inflammation; non-steroidal anti-inflammatory drugs and activity restriction (avoidance of hyperplantarflexion).[21] Further, physical therapy that included soft tissue therapy, stretching and mobilizations/adjustments of restricted joints of the lower kinetic chain should be done in conjunction with a progressive strengthening, balance and proprioception program.[21,23,27] An example of this type of rehabilitation program for PAIS was described in the case presentation above. This program was built from the chiropractor's clinical experience, return to play guidelines for ankle injuries as well as the current literature on the conservative management of PAIS. In this case, the patient needed to be able to maintain adequate balance when standing at work. Also, full ankle active ROM, strength, agility and ability to perform acceleration/deceleration movements quickly were needed to fully return to play. It is suggested to tape or brace the ankle in a protective dorsiflexion position when the patient returns to sports activity.[25] A systematic review showed that athletes with a history of ankle sprains have 70% fewer ankle injuries when taped or braced in comparison with those who did not wear prophylactic support.[28]

Cortisone injections into the affected area may alleviate the pain and allow the patient to progress into a rehabilitation program.[7,29,30] The present patient received a successful corticoid injection. His pain decreased from a

NRPS score of 4/10 to 2/10 post-injection. This decrease of pain allowed the patient to progress in the rehabilitation program.

In case of failure to conservative care, referral to orthopaedic surgery should be made. These patients may benefit from open surgical or arthroscopic resection of an os trigonum or tenosynovitis debridement of the area.[4,5] The natural history of PAIS is largely unknown. However, the cause and severity of the impingement and activities done will surely impact the prognosis and the time before a complete return to physical activity. For example, a ballet dancer might need a longer rest period before being able to return to sport since a very high level of stress is put on the posterior aspect of the ankle when competing.

Summary

Ankle sprains are common sports-related injuries.[1,2] Although most inversion-type ankle sprains resolve without any chronic disability, some cases can lead to PAIS.[2-6] The diagnosis can be made from a rigorous history and physical examination and after ruling out more severe conditions. However, many structures can be causing the impingement and confirming the cause of the symptoms can be difficult. Diagnostic ultrasound, CT scan, radiographs and MRI imaging allow the practitioner to rule out other pathologies and provide additional information to identify the cause of the impingement to facilitate treatment. MRI imaging is considered the technique of choice in the diagnosis of PAIS due to its ability to evaluate soft tissue and osseous structures as well as its high specificity and sensitivity to identify soft tissue abnormalities.[17,25,26]

Conservative management may be recommended as a first line treatment for PAIS, however, the literature is lacking to support specific conservative management strategies. Rehabilitation programs applied vigorously play an important role in the therapeutic management of PAIS; it is an effective way to avoid surgery in many cases.[7,21] A personalized strengthening program in conjunction with proprioception and balance exercises that progressively increase in intensity help improve static and dynamic stabilization of the ankle and prevent recurrence of injury.[21] In case of failure to conservative care, surgery can be an option to consider.[8]

Additionally, information is needed about PAIS especially in regard to epidemiology and conservative care. However, PAIS should be included in the differential diagnosis when a patient experiences posterior ankle pain exacerbated with plantarflexion.

To conclude, this 37-year-old dek hockey player was diagnosed with a PAIS caused by tenosynovitis of the flexor hallucis longus sheath associated with ostechondral lesion of the anterior aspect of the talus after spraining his ankle. He went through a 14 week conservative management program and cortisone injection that helped him gain pain free ROM, regain the strength of his left lower limb, improve his balance and proprioception as well as return to sport. This manuscript was written to present a potential consequence of a condition that clinicians encounter very often in their practice, an ankle sprain.

Acknowledgement

We would like to thank Dr Julie-Marthe Grenier, DC, DACBR for her help reading the MRI.

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