

(tibionavicular) ,
(anterior tibiotalar) ,
(tibiocalcaneal) , (posterior
tibiotalar) 4 가 .
(anterior inferior tibiofibula
ligament), (posterior inferior
tibiofibula ligament), (inferior transverse
ligament), (interosseous ligament)
가
1)
(lateral ankle sprain)
3 . 1
, 2
(semi-stable joint) , 3
(mortise) (Table 1). 3
(lateral) , (deltoid), 가
(syndesmosis) .
(anterior talofibular liga-
ment), (calcaneofibular ligament)
(posterior talo-fibular ligament) . 가
가 가
5
(medial malleolus) , , 가

2 가 . van Dijk
26) 48 가 5
가 가
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* 2004 , 5

6 CT MRI 가 가 가 , .
 MRI CT ,
 MRI 1 , 2 .
 8,27) 3 .
 13,20-22) . Kannus 가가 PRICE (, , , 가 , 가 3
 Renstrom¹³⁾ 가 가 , ,) , 가 ,
 , 가 , .
 . Povacz²²⁾ 146 2 가 .
 (giving way) 가 Aircast
 가 1.6 , 7 .
 Pijnenburg²⁰⁾ - (meta-analysis) 3 가 .
 , 6 가 .
 . Pijnenburg²¹⁾ 8 track cutting
 317 가 , , 8 .
 (taping)

Table 1.

I:	(가)	()	
II:		()	()
III:	(4 cm)	(가)	()

(Table 2, 3).
 2) (pronation-eversion), (internal rotation), (forced plantar flexion), (forced dorsiflexion) - (pronation-eversion) 가
 . Brostrom⁴⁾ 105

Table 2. (I)

stretch (non- weight bearing)	1	:10	5	10	1
stretch (weight bearing)	2	:10	5	10	
			5		
Isometric exercise		10	: 10		
	3		5		
	4				
	5				
	6				
Isotonic exercise		10	: 10		5
	7				
	8				
	9				
	10				
	11	10	:	2-3	

Table 3. (II)

Circular wobble board	12	10	:	2~3
Trampoline	13	10	:	2~3
				가
	track			가
	8			가
	cutting &			

가 1 가
 1 2 3
 17) , 3 , 2
 RICE
 (NSAID)
 3~5
 1 가 1
 가가
 2 1
 3 4~6

가 1 가
 1 가
 50~60 가
 2. (chronic injuries, overusing)
 1)
 가

(overpronation), -가
 (non-insertional) (tendinosis)
 (paratendinitis), (insertional)



Fig. 2. Achilles tendon stretching(weight bearing).



Fig. 3. Isometric plantar flexion.



Fig. 4. Isometric dorsiflexion.



Fig. 5. Isometric inversion.

, Hamilton⁹⁾ 'painful arc sign'



Fig. 6. Isometric eversion.

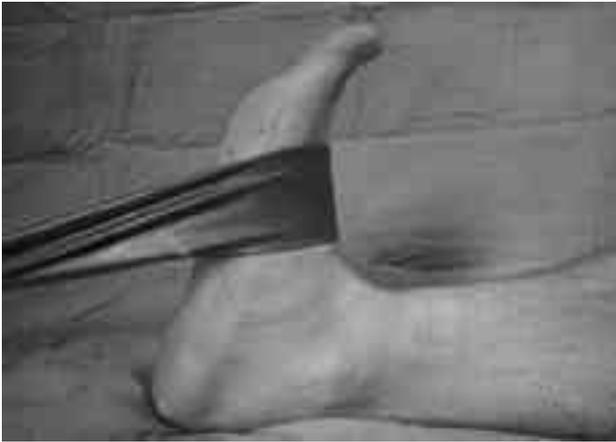


Fig. 8. Isotonic dorsiflexion.



Fig. 10. Isotonic eversion.

Puddu²³⁾ 1 (paratendinitis)

, 2

, 3

(enthe

sopathy)

, MRI

. MRI 가

가



Fig. 7. Isotonic plantar flexion.



Fig. 9. Isotonic inversion.

Johnston ¹¹⁾
6

6
, 6

90% 가



Fig. 11. Tip toe gait.



Fig. 12. Proprioception circular wobble board.



Fig. 13. A, 13B Proprioception trampoline.



Fig. 14. Achilles stretching.



Fig. 15. Plantar fascia stretching.

iontophoresis, 1 cm (insole) 가 electrohydrolic, electromagnetic, piezoelectric 가 가 Justin¹²⁾ glyceryl trinitrate 56% Ogden¹⁶⁾ 3 Chen⁶⁾ 90% 6 가 1

2) (Plantar fasciitis) 가 80%¹⁹⁾ 45

¹⁹⁾ 가 가 x-ray, MRI 가 MRI 가 75 ~ 90% (Fig. 14,15) iontophoresis, Snook²⁴⁾ 8 stretching 가 72% 88 ~ 95% 가 steroid 1

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= ABSTRACT =

Nonoperative Management of Foot and Ankle Injury Related to Sports

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The foot and ankle are one of the most common sites for acute musculoskeletal injuries related to sports activity. Foot and ankle injury includes ligament injury, tendon injury, bone and osteochondral injury, nerve injury, heel pain syndrome, phalangeal injury. This is a article about nonoperative management of foot and ankle injury. Therefore, this article includes various exercise technique, range of motion, stretching for muscle relaxation, proprioception training for rehabilitation. We recommend that orthopedic surgeon should discuss with patient and specialist for treatment plan after foot and ankle injury

Key Words: Foot and ankle injury, Nonoperative management

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