

***Physiotherapy programme after Peroneal Tendon Instability Surgery in a Hentball Player:
A Case Report***

Physiotherapy after Peroneal Tendon Instability

1 **Introduction :**

2 *Peroneal tendon instability, which is rarely encountered, was first described in a ballet*
3 *dancer by Monteggia in 1803(1). The peroneal tendons dislocate over the lateral malleolus*
4 *causing posterolateral ankle pain and a snapping sensation(5). Conservative treatment of this*
5 *condition can be utilized. However, the literature shows there is a high rate of failure for this*
6 *course of action(8). Considering that the majority of the patients are athletes, most of them*
7 *want a quick return to activity and expect a high rate of success(2,7,6).*

8 **Case Report:**

9 *When a 16 year old woman handball player in the Super League suffering from inversion*
10 *injury went to hospital, plaster cast was performed to her leg for 10 days. 10 days later, the*
11 *patient applied to our department. On the first day of the treatment, it is noticed that the*
12 *patient's peroneal tendon is unstable and then she was directed to the orthopedics clinic. 10*
13 *days after the examination in the clinic where she was diagnosed PTI, the patient's proximal*
14 *peroneal retinaculum and peroneal tendon was repaired. The patient was immobilized for 6*
15 *weeks. In the eighth week, physical therapy program was started two weeks late. The delay*
16 *was due to patient's private excuses. The patient had physical therapy 3 days a week for 4*
17 *weeks. Pain (by VAS), ROM (by goniometer), edema and atrophy (by perimeter) was*
18 *evaluated before and after the treatment.*

19 *Initial treatment consisted of cold pack, electrical stimulation to the peroneal muscle,*
20 *stretching the of the triceps surae muscles, weight bearing exercise and active ankle range of*
21 *motion for first week. In the second week, physical therapy was continued for a progressive*
22 *lower extremity strengthening program by using theraband and proprioception exercises. In*
23 *the third week, the patient went on single leg balance exercises and running on a treadmill at*
24 *a low speed. In the last week, she was progressed single leg balance exercises on soft surface,*

25 walking on the toe and heel exercises. Dorsi flexion with eversion was not allowed during the
26 first 4 weeks. After one month , swimming and cycling were recommended. Three months
27 after the surgery, she returned full activity and sport.

28 **Discussion:**

29 Peroneal tendon subluxation is estimated to occur in 0.3% to 0.5% of traumatic events to the
30 ankle(2). Surgery is usually thought as a prior treatment approach for patients with this
31 problem. Escalas et al reported a study of 38 patients with acute peroneal subluxation; after
32 several weeks of conservative therapy, 28 (74%) patients had no improvement and required
33 surgery(4).

34 In the literature, studies on physiotherapy after PTI surgery are rare. In these studies, the
35 physiotherapy applied after PTI surgery has given successful results however, there is no
36 standard protocol.

37 In a systematic review which was made by Roth and his coworkers, it was suggested that after
38 peroneal dislocation surgery the treatment includes immobilization of the ankle joint in a
39 cast, walking boot or taping(3). Typically, patients are instructed to be non– weight bearing
40 for 2 weeks, followed by 4 weeks in a walking boot. Likewise, our patient was immobilized for
41 six weeks in a cast with orthopaedic doctor proposal.

42 Additionally, Porter et al aimed to evaluate the results of operative treatment of recurrent
43 peroneal tendon dislocations and they observed 13 patients with an accelerated rehabilitation
44 incorporating early range of motion and treatment. Unlike, we started the physiotherapy
45 programme at 8th week because of patient's private excuses. Nevertheless, the patient showed
46 good progression. She could be able to return to play at her previous level in 3 months.
47 Besides, in the study conducted by Porter et al., operative treatment involved removing a
48 bone flap from the distal posterior fibula, deepening the posterior fibular groove, and

49 *reattaching the bone flap within the deepened groove while proximal retinaculum and*
50 *peroneal tendon reconstruction were used as a operative approach in our study. Therefore*
51 *our physiotherapy progression was mild whereas their protocol was aggressive.*

52 ***Conclusion :***

53 *After PTI surgery, physiotherapy has given successful results. Therefore, physiotherapy*
54 *programme should be started after PTI surgery to gain previous sportive performance.*

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