Hallux valgus in athletes.

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Editorial

"To date, the hallux valgus in athletes has a great debate in treatment, in another words, which is suitable for athletes conservative or surgical treatment and what the effect of the surgical on the competitive career of the athletes".

Hallux valgus is a common structural foot deformity in which the angular deviation of the hallux is >15° toward the lesser toes with respect to the first metatarsal bones, and it appears as a medial bony enlargement of the first metatarsal head. The first ray is an inherently unstable axial array that relies on a fine balance between its static (capsule, ligaments, and plantar fascia) and dynamic (peroneus longus muscle and small muscles of the foot) stabilizers to maintain its alignment [1].

Hallux valgus is frequent pathologies around the first metatarsophalangeal joint specially, Professional sportive people who require a different treatment plane. Surgery should be delayed if possible, because there will be high risk of potentially career-ending scarring of the joint. The first ray is the most important weight bearing part of the fore foot during the stance phase, the first ray carries 40%-60% of the body weight, twice as much as the lesser toes can carry and during walking, forces on the first ray increases to 2-3 times, and during running increases up to 8 times the body weight [2]. At toe off, the position of the center of pressure under the hallux and in runners the plantar pressure most of the time spent on the forefoot [3].

The hallux of athletes can be injured due to an acute accident or due to chronic overuse and therefore the hallux valgus is the most common pathology around the first metatarsophalangeal joint. The incidence of hallux valgus has two categories half of the cases occur in persons younger than 20 years this is named juvenile hallux valgus and the others have been occurred in persons aged between 30-50 years and is known as acquired hallux valgus [4]. Meatatrsus primus varus, hyperlaxity and flat feet are most common etiologies in juvenile and acquired hallux valgus [5].

The primary cause of the acquired hallux valgus is the weight of the body loaded the foot on the ground over years, so the acquired hallux valgus is aggravated by obesity, age, and high heels and narrow shoes. In sports repetitive activities with flat feet deformity may lead to hallux valgus [4]. Rare causes of traumatic hallux valgus due to rupture of the medial collateral ligament of plantar plate have been reported [6]. The higher incidence of hallux valgus in women due to wearing high heels and constricting foot wear [7]. In rock climbers and dancers estimated a high incidence of hallux valgus deformity [8,9].

The first metatarsophalangeal joint is stabilized by the extensor hallucis brevis, the flexor hallucis longus and the flexor hallucis brevis, the abductor and adductor hallucis, the medial and lateral capsule and collateral ligaments, injury to any of these structures can alter the position of hallux and causes the deformity. The insertion of the adductor hallucis exerts not only a lateral force on these structures but also rotational components which may aggravates to the great toe pronation and cross over deformity [3,4].

Hallux valgus is characterized by a medial prominence of the big toe accompanied by inflamed bursea and lateral deviation [8]. Pain under the sesamoid, metatarsal heads (metatarsalgia) and toe deformities (hammer toes, claw toes,cross-over toes) and sesamodititis may be accompanied with hallux valgus symptoms. The symptoms may aggravate till loss orange of motion [10]. Hallux valgus diagnosis needs radiographs dorso-pantar and lateral weight bearing foot in diagnosis and to classify the severity of hallux valgus and the normal values of the angles are: the intermetatarsal angle <9°, hallux valgus angle <20°, distal metatarsal articular angle <10°. 15 Conservative treatment approach should be taken to a hallux valgus in athletes whenever possible. Conservative approaches include the using of pads and insoles in sports and all day. Careful should be taken with shoes to be wide toe box and with medial support. The hallux valgus is not the problem of the foot's structure and function but also affects the Lower limb and pelvis motion during walking when we treat the hallux we should solve The functional problems related to this pathology or related to the aspect of motor behaviour [4,11].

Our Recommendations for treatment of hallux valgus: first we should discover the pathomechanics Cause For this problem, then we start by the conservative treatment and delay the surgical treatment to do not end the competitive career for the athletes.

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