

## **Introduction:**

The plantar fascia is a thick tissue band that connects the heel bone (the medial tubercle of the under surface of the calcaneus) to the (metatarsophalangeal joints), forming the medial arch of the foot which supports the foot during walking. Irritation and scarring of the plantar fascia, is one of the most common causes of heel pain. [1, 2]

Plantar fasciopathy accounts for 11–15 % of all foot disorders in athletes and sedentary life patients. [3] While commonly it is referred to a wrong nomenclature as plantar fasciitis, it is degenerative process (i.e., fasciopathy). The etiology of plantar fasciopathy is not clear. It can be the result of irritation due to over strain of the fascia which induces mucoid degeneration. [4] Pathological finding includes degenerative tissue changes without inflammatory mediators. [5,6]

Diagnosis of plantar fasciopathy is based on history taking and physical examination. Typically, patient presents with heel pain during weight bearing, especially at early morning and with the first steps after a period of inactivity. [7] Patient usually has tenderness around the site of the plantar apponurosis. Pain can be produced by stretching the diseased plantar apponurosis by passive hyperextension of the metatarsophalangeal joints. [8] Tightness of the Achilles tendon (with dorsiflexion of the ankle limited by 5 degrees or more) is found in almost 80% of patients. [9] Planter fasciopathy should be differentiated from other conditions which present with heel pain like pad of fat atrophy, heel contusion, tibialis posterior tendonitis, tarsal tunnel syndrome and entrapment neuropathies of the first branch of the lateral plantar nerve. [10, 11] One of the golden diagnostic tools is ultrasound. Thickening of the plantar fascia insertion more than 5 mm is diagnostic. [12]

Fortunately, the majority of patients with plantar fasciopathy pain can be successfully treated with conservative means, including pain medications, local steroid injections, plasma rich protein injection, orthotic devices, plantar fascia stretching exercises and shock wave therapy. However, for the 10-15 % of patients who do not obtain relief from conservative care for six months or more and suffer from intractable pain, traditional surgical treatment offers less than ideal results, with potential complications outweighing surgical gains. [13]

Endoscopic plantar fasciotomy is a relatively new procedure developed by Barrett and Day. The procedure involves an endoscopic approach to the heel, allowing a plantar apponurosis release to be performed with delicate instruments, minimal dissection, and immediate weight bearing. [14, 15]

The purpose of this study is to report the efficacy of this minimally invasive procedure for treating resistant plantar fasciopathy, through using two medial incisions.

*The study was approved by the local ethical committee and the patients were informed about the publication.*

### **Patients and methods:**

This study is an interventional prospective follow-up study. Between January 2014 and July 2015, 47 feet in 41 patients diagnosed clinically as chronic plantar fasciopathy (not responding to conservative treatment for six months or more) included in this study. All operations were done by one surgeon. Patients were divided into two groups.