Comment on Giannini et al.: A minimally invasive technique for surgical treatment of hallux valgus: simple, effective, rapid, inexpensive (SERI)

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Dear editor,

We read the recent article entitled “A minimally invasive technique for surgical treatment of hallux valgus: simple, effective, rapid, inexpensive (SERI)” published in the September 2013 issue of International Orthopaedics by Giannini et al. [1] with great interest. They described a novel mini-invasive surgical technique for the treatment for hallux valgus (HV). They analysed a series of 1,000 consecutive cases of HV, surgically treated by the minimally invasive SERI technique, reporting results at mid-term follow-up. They concluded that the SERI technique was effective in treating mild to moderate HV patients in terms of relief from symptoms and functional improvement. However, there are some comments we would like to raise related to this article.

First, it is accepted, to correct the HV deformity, a lateral soft tissue release should be performed first, which includes adductor hallucis attachment release, transverse metatarsal ligament release, metatarsal-sesamoid ligament release and the lateral joint capsule release, which can reposition the displaced sesamoids and avoid recurrence of the HV deformities. However, the effect of the soft tissue procedure mentioned in this article, by manually stretching of the adductor hallucis

and the lateral soft tissue, is hard to evaluate. There is no consensus or validated standard for this stretching process. The strength of surgeons varies from each individual, which may be either too strong causing iatrogenic vascular, nerve and tendon injuries, or too weak to totally release the soft tissue structure. Moreover, sesamoid dislocation commonly occurs in HV patients, which is quite difficult to correct by mere manual stretching. As a result the dislocated sesamoid may hinder the lateral translational displacement of the first metatarsal head. Commonly, it is difficult to correct sesamoid dislocation and incision of the sesamoid suspensory ligament without open reduction.

Second, this surgical technique merely utilized a 1-cm incision at the level of the neck of the first metatarsal bone to perform this procedure. In our opinion, there is still some confusion with this procedure. In order to realign the metatarsosesamoid complex to decrease the first IM angle and correcting the HV deformity, it is necessary to release the lateral soft tissue combined with a medial capsule reefing. Obviously it is quite difficult to complete this step with such incisions. Most of the HV patients suffer from osteophyte around the proximal metatarsal bones, and only by removing the osteophytes can the symptoms be significantly relieved. However the incision in this procedure is away from the first metatarsophalangeal joint. What's more, it is controversial whether the bunion in the medial side of first metatarsophalangeal joint capsule should be cut off [2]; thus, a 1-cm incision does not satisfy the need for surgery [3].

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With regards to the operative technique for the HV deformities, the authors use only one K-wire for fixation. K-wire has its own weakness, such as less capacity to stabilize the osteotomy, pin tract infection, skin irritation, and the necessity of pin removal. Rigid fixation is critical to the osteotomy. Nevertheless, the type of fixation mentioned in this article tended to be easily displaced [4], which could cause bone malunion or nonunion, recurrence and metatarsalgia.

Finally, this article just mentioned a mid-term follow-up, however a postoperative research should have an accurate followed-up period.

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