Editorial Commentary: Arthroscopic Treatment of Ankle Instability Is the Emerging Gold Standard

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Abstract: Arthroscopic techniques for the treatment of ankle instability are increasing. The possibility of treating concomitant ankle pathology and ankle instability in the same procedure with similar outcomes and minor complications is making foot and ankle surgeons rethink the role of the current gold standard technique, the open Broström-Gould procedure. The improvement of arthroscopic procedures in the ankle joint, as has happened before in other joints, is forcing the evolution of the classic open gold standard techniques toward an arthroscopic approach. A nondistraction and ankle dorsiflexion procedure is the key arthroscopic technique. The anterior talofibular ligament's superior fascicle, an intra-articular structure, is located on the floor of the lateral gutter, and distraction detrimentally narrows the view and access to this space.

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We thank and congratulate Zhou, Zhang, Zhang, Li, Shen, and Song for their study entitled, "All-Inside Arthroscopic Modified Broström Technique to Repair Anterior Talofibular Ligament Provides a Similar Outcome Compared With Open Broström-Gould Procedure."[1] In the paper, they describe an arthroscopic procedure to treat ankle instability and compare their results with a group of patients who were treated with the classic gold standard, open Broström-Gould.

The arthroscopic treatment of ankle instability has always attracted particular interest among foot and ankle surgeons. Intra-articular pathology is frequently encountered in association with ankle instability. Treatment of intra-articular injuries and of the instability itself during the same arthroscopic procedure is essential for an optimal result and to avoid recurrence and chronic symptoms.[2] Open Broström-Gould is the current gold standard surgical treatment of chronic ankle instability. However, the possibility of addressing both the instability and any associated pathology elevates ankle arthroscopy as the potential technique of choice.

Although the arthroscopic treatment of ankle instability is a young technique, it looks like the day is close for this surgery to replace open surgery as the gold standard. Several authors have developed arthroscopic techniques to treat chronic ankle instability, and all of them reported excellent results.[3-9]

Treatment of secondary intra-articular pathology is recommended to obtain a better result and not just focus the treatment on the ligamentous injury. Many surgeons scope the ankle but then switch to an open ligament repair or reconstruction, as they are convinced that an open procedure is stronger and more effective than an arthroscopic one. However, arthroscopic procedures have been shown to be reproducible, safe, and effective in ligament repair,[10,11] with the strong advantage of allowing the treatment of ankle instability and associated ankle pathology.

Both a thorough knowledge of ankle anatomy and specific skills are required when addressing ankle instability through an arthroscopic approach. Arthroscopic ligament repair or reconstruction is technically demanding. Although ankle distraction is a viable and common option in some regions to scope the ankle and treat its pathology, a nondistraction and ankle dorsiflexion technique is the key when ankle instability must be treated.[12] The superior fascicle of the anterior talofibular ligament (ATFL), an intra-articular structure, is located on the floor of the lateral gutter. If an

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arthroscopic technique with ankle distraction is performed, access and view of the lateral gutter will be difficult, as the space narrows.[13] In addition, the ligaments are tight when distraction is performed, which limits ligament repair or reconstruction.

In contrast, the use of inferior extensor retinaculum (IER) as a biological reinforcement of the ligament repair remains controversial. Zhou et al.[1] assume that grasping the optimal amount of IER to reinforce the repair can be done from the accessory anterolateral portal, and without any direct IER visualization. They place the accessory anterolateral portal at 1.5 cm distal to the anterolateral portal, which they locate by transillumination. In our opinion, it seems difficult to grasp a sufficient amount of IER to reproduce Gould's procedure when performed as described. Many surgeons who perform the open Gould procedure confuse the sural fascia with the IER or use the IER's superolateral band as reinforcement.[14,15] Both are thin and friable structures that do not provide enough resistance to be used as a ligament repair augmentation.[16,17] In those cases, the clinical results are obtained because of the ligament repair and not for the supposed Gould procedure.

At the moment, only a few studies have compared arthroscopic treatment with open treatments[1] or comparing different arthroscopic procedures with each other.[18] These studies are sorely needed to demonstrate whether arthroscopic techniques are to become the next gold standard treatment for ankle instability.

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