Endoscopic Resection for Talocalcaneal Coalition Using Posteromedial Approach: Report of Three Cases

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Introduction/Purpose: Initial treatment of symptomatic talocalcaneal coalition (TCC) is reduced activity or cast immobilization. If these conservative treatments does not relieve symptoms, surgical treatment is recommended. The operation for TCC is usually treated by an open procedure. We report the results of the three cases by endoscopic resection using posteromedial approach.

Methods: Three consecutive patients (3 feet, 2 men and 1 female) who underwent surgery for TCCs were reviewed. Patient’s age at the time of surgery were 12, 13, 19 years respectively. All patients suffered from a foot pain after ankle sprain. Two patients didn’t play sports because of this pain. This operation is performed in the supine position. Two portals are each created at the proximal and distal to the vertex of the medial malleolus. Portal positions are marked by use of sonography to avoid the injury of tendons and neurovascular. By use of a shaver a radiofrequency device, as much soft tissue must be removed as possible to allow easy coalition resection, the surgeon performs sufficient resection of the coalition using an abrader until the normal articular surface can be confirmed. Movements of ankle and toes are encouraged from immediately post-operatively. Weight bearing is permitted 1 week after surgery.

Results: All patients had a relief of pain. The mean preoperative and final follow-up AOFAS ankle-hind foot scale scores were from 65.3 to 92.3. Two patients returned to playing sports by three months. The mean operation time was 123 minutes (range: 97–148 minutes). However, compared with the initial cases, recent cases tended to have shorter surgical times. No complications occurred.

Conclusion: A posteromedial approach for TCC is a useful technique because the advantage of allowing (1) a direct approach to both the middle- and posterior-facet coalitions without obstruction, (2) the creation of sufficient working space, (3) the obtuse insertion angle between the endoscope and instrument. On the basis of these advantage, endoscopic resection of a TCC using the posteromedial approach is considered a useful technique. To decrease the risk of neurovascular
damage and tendon injury, portal positions are marked in advance by use of sonography, so that, a safe endoscopic resection of the coalition is performed.