

Early Results of Arthroscopic Treatment of Haglunds Deformity in A Latin American Cohort

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Abstract

Arthroscopic treatment for ankle diseases has proven to be successful as multiple articles describe favorable outcomes, low complication rates and cost-effectiveness [1]. Nonetheless, these articles are most often from North America, Europe and Pacific nations, thus there is a lack of literature supporting these outcomes in the Latin American patient population. The purpose of this study was to describe the early outcomes of a commonly performed procedure focusing in the Latin patient population. We conducted the study on a case series of patients who underwent arthroscopic treatment of Haglund lesions at a tertiary care center in Medellin, Colombia. Outcomes were measured by previously trained personnel decrease bias.

The goal of this study was to report the short-term outcomes of these patients and thus our focus was on the first 12 months after surgery. A total of 6 patients had available data for the follow up.

The mean age was 43.1 (SD 21.6), 66.7% of patients were males and all cases had unilateral surgeries. Mean follow up was 10.9 months (range 3- 24.3). 100% of patients stated they would undergo the operation again, with the mean satisfaction on the 10-point scale being 9 (range 7-10). No patient had undergone a second procedure for the same indication. One patient had instability symptoms, but this was not reproducible during the examination. In summary, arthroscopic treatment of Haglund deformity in a Latin patient population yielded satisfactory results.

Introduction

Ankle pain is a common cause of morbidity in the young and middle age patient population [2-4]. More specifically, posterior ankle pain is a cause of great concern as multiple structures can be the culprit of the pain [5]. Haglunds deformity also referred as pump bump or Bauer bump is a posterior-superior osseous prominence of the calcaneus, which may lead to bursitis and inflammation at the site of the insertion of the Achilles tendon in the posterior heel, which can be one of the reasons for pain. This exostosis may irritate the overlying soft tissues and patients can develop a clinically apparent bursitis [6,7]. This inflammation can cause significant swelling that may not allow patients to perform sports and/or work, thus causing a great degree of concern [3].

Various treatment have been developed to treat these patients, ranging from activity modification and heel cold stretching and pain management to open osteotomy based on patient symptoms and anatomical considerations [3,8-10]. Surgical management of patients with the postero-superior calcaneal prominence has been described as successful in various series. Open management of this syndrome, has been satisfactory but not without complications, thus arthroscopic treatment of this syndrome appears to be the new gold standard.

Population based studies in orthopedics have demonstrated that patient specific factors such as age and race have an effect on outcomes after surgical treatment of certain conditions [11-13]. Nonetheless, there is a lack of studies in the Latin patient population and thus the purpose of this study was to determine the outcomes of arthroscopic treatment of Haglunds syndrome in a cohort of patients in Latin America.

Materials and Methods

A retrospective level of evidence [4], case series was conducted evaluating the outcomes of patients who underwent retro-calcaneal bursectomy and osteoplasty for Haglunds syndrome in a tertiary care center in Colombia. Informed consent was obtained from all patients before the surgery. Patients were asked to return to clinic for one research appointment at follow up after surgery. Patients operated on during year 2014 were included in this study. Those who underwent additional procedures at the time of surgery for Haglunds syndrome were excluded from this study. Outcomes were satisfaction on a 10-point scale, willingness to undergo the operation again, reoperations and post-operative injection requirement. Data are presented in mean and Standard Deviations (SD).

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Surgical technique was performed based on current standard technique. An arthroscopic calcaneoplasty was performed. The patients were positioned in the prone position and either spinal anesthesia or a regional block was performed. The Achilles tendon, lateral and medial malleoli were marked and two incisions were made to follow the two portal technique as described by VanDyck et al [14]. Care was taken as to avoid the extensor tendons and the posterior ankle joints. Once the exostosis and bursa were identified a high-speed burr was used to lyse the fragment. Following surgery all patients were allowed to bear weight as tolerated and were referred to a physical therapy focusing on regaining strength and range of motion.

Results

A total of 6 patients met the inclusion criteria. The mean age was 43.1 years (SD 21.6). 66.7 percent of patients were males. All patients received unilateral surgeries. The mean follow up was 10.9 months (range 3-24.3). None of the included patients were smokers or chronic alcohol consumers.

All patients referred they would undergo the same operation again. Mean satisfaction on the 10-point scale was 9 (range 7-10, SD 1.26). No patient underwent a second procedure for the same indication. One patient (16.6%) referred instability symptoms during gait but this was not reproducible during examination. No patient required the injection of corticosteroids within the follow up period. One patient referred he was not able to return to playing recreational sports.

Two patients (33.3%) reported minor edema during the initial post-operative period. No other complications were reported.

Discussion

Arthroscopic treatment of Haglund's Syndrome is a commonly performed procedure that has been shown to provide significant benefits to patients with small complication rates [2,3,6,8,15-18]. Nonetheless, the outcomes of these patients have not been well studied in patients from Latin America and so the purpose of this study was to conduct a retrospective case series to evaluate the outcomes of these patients.

Our outcomes are comparable to what has been reported in the literature. Wu et al. reported their results of 25 patients with a mean age of 27.7 years [19]. In this series, there were 14 patients with excellent results, 7 with good results, 2 fair results and 2 poor results. Furthermore, the authors reported that no major complications occurred, just as in our series of patients. The patients described in this series were from the Huashan Hospital in Shanghai China, which leads us to believe that race does not seem to play an important role in the treatment of this condition.

A similar study by Ortmann et al. of 32 heels with Haglund syndrome, described the outcomes at a mean of 35 months. In this series, there were 26 excellent results, 3 good results and 1 heel classified as having a poor result. Only 2 patients reported complications with one of them being an Achilles rupture and the other one residual pain and swelling. One of our patients described edema during the follow up visits, which relates to the experience of the previously mentioned case.

A recent systematic review and meta-analysis by Wiegerinck et al. evaluated over 547 procedures in 461 patients and compared the outcomes of arthroscopic Vs open surgical treatment of retrocalcaneal bursitis [20]. The authors concluded that arthroscopic treatment was more beneficial than open but the evidence behind it was deemed as low at that time. Furthermore, heterogeneity of the studies did not allow to pool data and so, no direct comparison could not be made. This large study demonstrates that the current gold standard treatment modality for these patients is endoscopic resection of the exostosis. Although this study did not find a difference in outcomes of the Latin American population compared to outcomes in the literature, prospective studies should be made in order to test these findings with a higher level of evidence.

Limitations

Our study is not without limitations. Our sample size was limited and preoperative outcomes measures could not be traced back the included patients. Because of this, no statistical analysis could be performed when measuring change over time. Also, the lack of analysis of Patient Reported Outcomes (PROMs) such as the AAOFAS scale, limits the availability of our findings for future data pooling in systematic reviews and meta-analysis. Nonetheless, this is the first study to examine the outcomes of patients treated with endoscopic resection of postero-superior exostosis of the calcaneus in a cohort of patients from Colombia, which is to our knowledge the first article describing such outcomes in these patients.

Conclusion

Endoscopic treatment of Haglund's syndrome provides symptomatic relief in Latin American patients. Satisfaction with the surgery was high and all of the patients in this series would undergo the same operation again. The outcomes of these patients appear to be similar to those from other parts of the world.

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