

Comparative study of three surgical techniques for the treatment of mild and moderate Hallux Valgus

Luiz Carlos Ribeiro Lara¹, Delmo Joao Carlos Montesi², Fagner do Prado¹, Felipe Antonio da Silva Pires¹, Marcelo Abdulkleeh Santos¹, Niccholas Cavichini³, Rafael Rodegheri

Descriptors

Hallux valgus / radiography; Osteotomy / radiography; Orthopedic procedures / methods

Keywords

Hallux valgus / treatment; Osteotomy / radiography; Orthopedic procedures / surgery

Academic Course of Orthopedics and Traumatology, Department of Medicine, Universidade de Taubate, Taubate, SP, Brazil; Foot and Ankle Surgery Group, Hospital Universitario de Taubate, Taubate, SP, Brazil.
Grupo de Cirurgia do Pe e Tornozelo, Hospital Universitario de Taubate, Programa de Residencia Medica, Hospital Universitario de Taubate, Taubate, SP, Brazil

Corresponding Author

Luiz Carlos Ribeiro Lima, Av Italia 1551, R1 - Rua 1, no. 666 - Jardim das Nacoes - CEP: 12030212, Taubate, SP, Brazil
E-mail: luizrlara@hotmail.com

Interest conflicts

No

Received on

09/10/2014

Accepted on

11/19/2014

SUMMARY

Objective: This study aims to evaluate, in a comparative way, the results obtained with the surgical correction of mild and moderate hallux valgus, using three surgical techniques: "Chevron", [Illegible] and percutaneous (Reverdin-Isham), analyzing the clinical-functional results. and radiographic. **Methods:** It is a retrospective study. The sample consists of 79 patients, 72 being female, with a mean age of 53.2 years. Clinically and functionally validated for the points of the American Orthopedic Foot and Ankle Society (AOFAS) and radiographically for the angles of the [Illegible] medial angle (AIM), angle of the distal joint of the 1st metatarsal (AADM). **Results:** The mean pre-operative AOFAS was 39.4 points, increasing to 90.2 in the overall sample. Analyzing each procedure used, the increase in AOFAS was 56 points in the "Chevron" technique, 49.5 in Bosch and 59 points in the percutaneous technique. All attentive angles will show significant diminution. Regarding the AVH, the pre- and postoperative angular variance in the general sample was higher, going from 25.9 to 12.9. In isolation, from 24.4 to 14.9 (9.8) in the Chevron technique, from 25.4 to 13.5 (11.9) in the Bosch technique and from 27.5 to 11.3 (16.4) in the percutaneous technique. AIM also moved lower, from 14.3 to 10.3 in the general sample, isolatedly we observed with the "Chevron" technique, a variance of 13.8 to 9.9 in Bosch 15.3 to 10.6 and in the percutaneous 14.1 to 10.9. The AADM also decreased significantly from 15.6 to 8.6 in the three employees. In the "Chevron" technique lowered from 14.9 to 8.1 (6.8), from 13.4 to 5.6 (7.8) in the Bosch technique and from 17.6 to 10.8 (6.8) in the percutaneous technique. **Conclusion:** The results obtained are similar, evidencing the efficacy of three operative techniques, with a non-postoperative increase in the AOFAS score and a decrease in two AVH, AIM, AADM angles. The AHV obtains a significantly better reduction in the percutaneous technique when compared to other techniques.

ABSTRACT

Objective: This study sought to compare the results obtained by surgical correction of mild and moderate hallux valgus using the following three surgical techniques: "Chevron", Bosch and percutaneous (Reverdin-Isham). These techniques were compared by analyzing clinical, functional and radiographoc results. **Methods:** This retrospective study included 79 patients with a men age of 53.2 years. Of these, 72 patients were women. We evaluated patients' clinical and functional performance according to the American Orthopaedic Foot and Ankle Society (AOFAS) score; radiography analysis included the hallux valgus angle (HVA), intermetatarsal angle (IMA) and the distal metatarsal articular angle (DMAA). **Results:** The mean preoperative AOFAS was 39.4, which increased to 90.2 in the general sample. The analysis of each technique showed that AOFAS increased by 56 points in patients who underwent "Chevron" technique, 49.5 in those who underwent the Bosch technique tand 59 in those who underwent the percutaneous technique. All measured angles decreased significantly. The pre and postoperative rang for the HVA was greatest in the general sample (from 25.9 to 12.9). The HVA ranged from 24.4 to 14.6 (9.8) in the "Chevron", group from 25.4 to 13.5 (11.9) in the Bosch group and from 27.5 to 11.1 (16.4) in percutaneous group. We also observed a decrease in IMA in the general sample (from 14.3 to 10.3). The IMA ranged from 13.8 to 9.6 in the "Chevron" group from 15.3 to 10.6 in the Bosch group and from 14.1 to 10.9 in the percutaneous group. The DMAA also showed a significant decreased with the three applied techniques (from 15.6 to 8.6). The DMAA ranged from 14.9 to 8.1 (6.8) in the "Chevron" group, from 13.4 to 5.6 (7.8) in the Bosch group and 17.6 to 10.8 (6.8) in percutaneous group. **Conclusion:** Results were similar indicating the efficacy of the three surgical techniques; postoperative AOFAS score increased and HVA, IMA and DMAA decreased. The HVA reduced significantly better in patients who underwent the percutaneous procedure than in those who underwent the other techniques.