The purpose of this study was to evaluate the addition of an intermetatarsal screw provided additional stability to the TMTJ arthrodesis site and if its application had significant impacts on post-operative outcomes.

A retrospective review was performed on 86 patients (n=86) who underwent a Lapidus procedure between 2013 and 2020. Preoperative diagnostics and indications for the procedure included hallux abductovalgus, first ray hypermobility, first ray instability, and metatarsal primus eleva.

Patients’ charts were reviewed for the following information: patient name, length of post-operative follow-up, broken hardware, loosened hardware, hardware removal, fractures, pain to operative site, and deformity recurrence. The average follow-up time for patients included in this study was 12 months – allowing ample time for bony union to occur at the tarsometatarsal arthrodesis site.

Within our patient population, fractured hardware did not lead to complications such as bone fractures or stress risers. In those patients who did have fractured hardware, the fractured portions remained within the metatarsal without iatrogenic injury. Additionally, those with fractured hardware were not correlated with the patients who had delayed/non-union.

The HAV deformity is triplanar in nature and requires multiple points of fixation to adequately address all its components. When utilized correctly, the intermetatarsal screw strengthens the structure of the first tarsometatarsal structure and subsequently benefits the overall surgical outcome for the patient. Our patients have shown positive post-surgical results with the addition of an intermetatarsal screw without resultant fractures or complications. Therefore, implementation of an intermetatarsal screw adds another point of stabilization to improve surgical outcomes and long-term patient prognosis.