Extra-Osseous TaloTarsal Stabilization using HyProCure®: Preliminary Clinical Outcomes of a Prospective Case Series  
Multi-centered prospective study with subjective outcomes measured with the Maryland Foot Score assessment. Results included 36.97% reduction in foot pain, 14.39% increase in foot functional activities and 29.49% improvement in foot. Implant removal rate was 4.35%.

Extra-Osseous TaloTarsal Stabilization using HyProCure® in Adults: A 5-Year Retrospective Follow-up  
Journal of Foot and Ankle Surgery, Volume 51, Issue 1, Pages 23-29, January 2012  
A review of 83 adult patients representing 117 feet who underwent EOTTS as a stand-alone procedure. The average follow-up was 51 months. The average Maryland Foot Score was 88/100. The study showed a permanent removal rate of HyProCure® of less than 6%. No significant, long lasting complications were reported.

Surgical Treatment of Hyperpronation Using an Extra-Osseous TaloTarsal Stabilization Device: Radiographic Outcomes in Adult Patients  
HyProCure® placement resulted in normalization of pathologic T2M and TD angles. Angles that were normal pre-operative remained normal. EOTTS with HyProCure® was effective in controlling motion in the desired planes without causing overcorrection or blocking in other planes.

The Effect of HyProCure® on Tarsal Tunnel Compartment Pressures in Hyperpronating Feet  
Journal of Foot and Ankle Surgery, Volume 50, Issue 1, Pages 44-49, January 2011  
Cadaveric based study showing a 34% reduction in Tarsal Tunnel and a 38% reduction in porta pedis pressures following EOTTS with HyProCure®.

Effect of Extra-Osseous TaloTarsal Stabilization on Posterior Tibial Tendon Strain in Hyperpronating Feet  
Journal of Foot and Ankle Surgery, Volume 50, Issue 6, Pages 676-681, November 2011  
Cadaveric based study showing 51% decreased strain on the posterior tibial tendon following EOTTS with HyProCure®.
Peer-reviewed Published Evidence

Evaluating Plantar Fascia Strain in Hyperpronating Cadaveric Feet Following an Extra-Osseous TaloTarsal Stabilization Procedure

Cadaveric based study showing 33% decreased strain on the plantar fascia following EOTTS with *HyProCure®*.

Stabilization of Joint Forces of the Subtalar Complex via *HyProCure®*

Mathematical proof that *HyProCure®* decreases forces acting on the middle/anterior talocalcaneal facets and stabilizes those forces on the posterior talocalcaneal joint.

Radiographic Evaluation of Navicular Position in the Sagittal Plane – Correction Following an Extra-Osseous TaloTarsal Stabilization Procedure

Retrospective analysis showing restoration of navicular height by 26% following EOTTS with *HyProCure®*.


*Journal of Foot and Ankle Surgery*, Volume 50, Issue 6, Pages 672-675, November 2011
Cadaveric based study showing 43% decreased strain on the tibialis posterior nerve following EOTTS with *HyProCure®*.

Extra-Osseous Stabilization Devices: A New Classification System

Stabilization at the cruciate pivot point of triplanar talotarsal motion is the ideal way to stabilize the TTM. Type I (subtalar arthroereisis) devices function by blocking/limiting talar motion. Type II devices are anatomically designed to restore the normal amount of triplane talotarsal motion. This key difference is what contributes to the improved success of Type II devices.

Extra-Osseous TaloTarsal Stabilization with *HyProCure®* – Radiographic Outcomes in Adult Patients

Retrospective analysis showing normalization of the talar second metatarsal angle on an AP view proving transverse plane correction. Also, there was normalization of the talar declination angle on the lateral radiograph proving sagittal plane correction. Since talotarsal motion is triplane this shows the ability of triplane correction following EOTTS with *HyProCure®*.

For study abstracts, product information, interactive online training and more, visit [www.GraMedica.com](http://www.GraMedica.com)

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