MIS Plantar Condylectomy Technique Guide: A Minimally Invasive Approach to Plantar Metatarsal Head Resection

Nicolas (cole) Zingas, Christopher Zingas

Typically, any plantar condylectomy has required a dorsal approach and elevation of the metatarsal head. By using an MIS burr, we are able to achieve plantar metatarsal condyle resection and allow for faster patient recovery.

Indications for the surgery are of plantar keratosis with radiographic prominence and metatarsalgia. A contraindication would be severely osteoporotic bone, due to the risk of overresection of the articular surface.

The procedure involves a plantar based 3mm incision just distal (~1.5cm) and eccentric to the metatarsal head of interest to avoid a trajectory involving the flexor tendon. Blunt dissection is performed down to bone, avoiding the interspace, to avoid injury to the interdigital nerve. Toes are then held in position of dorsiflexion while axial compression is applied while the burr is inserted on the plantar condyles. Imaging confirms placement of the burr, and then the toes are plantarflexed during boney removal.

This relatively simple approach is novel and just one technique in many recent additions to the MIS foot and ankle surgical repertoire. We believe that this video will be a valuable addition and increase surgeon's comfort with the procedure, possibly expanding indications for plantar condylectomy given the quicker recovery timeline (WBAT, 3 weeks in a postop shoe).

We are currently in the process of evaluating a case series of these patients, however no current literature looks at evidence-based outcomes of the procedure.