Identification of Patients and Evaluating Their Safety for MIS Arthrodesis of the 1st Tarsometatarsal Joint
Mark E. Solomon DPM, FACFAS; Eric S. Baskin DPM, FACFAS; Aamir Ahmed, DPM, AACFAS

STATEMENT OF PURPOSE
To identify portals for minimally invasive arthrodesis of the 1st Tarsometatarsal (TMT1) and determine their safety to surrounding structures.

METHODS
Thirty fresh cadaveric specimens were utilized in an initial study to evaluate multiple portals described in the literature for MIS arthrodesis of the 1st TMTJ. Twenty additional specimens were used for verification of findings.

PORTALS (Fig 2)
A. 1st dorsal intermetatarsal portal
B. 3rd intermetatarsal portal
C. 5th intermetatarsal portal
D. 1st dorsal webspace portal
E. Lateral plantar portal

ANALYSIS AND DISCUSSION
The structures at risk that were evaluated are Deep Peroneal nerve (DPn), Medial dorsal cutaneous nerve (MDCN), Lateral plantar nerve (LPN), and Hallucis Longus tendon (EHL). Further, the joint surfaces showing complete cartilage were assessed to preclude tissue disruption and surgical site morbidity.

ANALYSIS AND DISCUSSION
The potential advantages of this procedure are smaller incisions that decrease chances of wound complications, pain and infection. This can potentiate the need for possible future arthroscopic procedures. Disadvantages include large learning curve, non-union, malunion, and prolonged non-union.

DISCLOSURE
Paid consultant for WRIGHT Medical Technologies. Paid consultant for Orthofix.

INTERNET REFERENCES

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