

Minimally Invasive Forefoot Surgery - Slater Planning Classification System

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Abstract

With Minimally Invasive foot surgery multiple bones can be operated on simultaneously. An accurate coding system aids in surgical planning, research and surgical consent. We propose a surgical classification system that we have used in over 1000 forefoot procedures.

Keywords: Foot; Minimally Invasive; Classification; Slater

Introduction

Classification systems in orthopaedics have been used extensively in orthopaedics for a variety of different applications. Notably in research, for descriptive purposes, and attempts to classify disease and injury to predict pathology and treatment outcomes [1-25].

A good classification system should be easily reproducible so that inter observer reliability is high. With the advent of minimally invasive techniques of surgery in the forefoot it has become more necessary to be accurate in planning surgery. In particularly obtaining consent there comes an increasingly demanding burden on the surgeon to be accurate pre-op planning.

Writing out each bone to bone to be operated on takes time and there simply isn't room on a standard hospital consent form. I propose a classification system for the planning of forefoot surgery to make planning easy and accurate and to aid in the consent process.



In this planning system each bone is assigned a letter and/or number to aid in its description.

M1P1 Arthroscopic Fusion

This foot has had the M1P1 Fusion performed arthroscopically.



Figure 2

Extensive forefoot surgery

This foot has had extensive forefoot surgery in a large hallux valgus deformity.



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Mid Foot Fusion

This foot has had a midfoot fusion of N-C1 C2 and C3 + Stabilisation of TA and CA.



Figure 4

Conclusion

We propose this as an easy classification system for research and planning purposes in minimally invasive surgery of the forefoot. We present this as a living document as no doubt as techniques evolve further development of the code will be required.

Bibliography

- 1. GB Monteggia. "Istituzioni Chirurgiche". Volume 5. Milano, Pirotta and Maspero (1814).
- 2. Berger Richard A and Weiss Arnold-Peter C. "Hand Surgery". Lippincott Williams and Wilkins (2004): 249.
- 3. Clifford R. Wheeless III. "Frykman Classification" (2013).
- 4. Otsuka NY and Kasser JR. "Supracondylar Fractures of the Humerus in Children". *Journal of the American Academy of Orthopaedic Surgeons* 5.1 (1997): 19-26.
- 5. Rüedi., et al. "AO principles of fracture management, Volume 1". Thieme (2007): 96.
- 6. Krimmer H., et al. "Scaphoid fractures diagnosis, classification and therapy". Unfallchirurg 103.10 (2000): 812-819.
- 7. John J Callaghan., *et al.* "The Adult Hip, Volume 1". Lippincott Williams & Wilkins (2007): 958.

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- Allsop D and Kennett K. "Skull and facial bone trauma". In Nahum AM, Melvin J. Accidental injury: Biomechanics and prevention. Berlin: Springer (2002): 254-276.
- 9. Bishop YMM., et al. "Discrete multivariate analysis". MIT Press, Cambridge (1975).
- 10. Mayfield JK., *et al.* "Carpal dislocations: pathomechanics and progressive perilunar instability". *Journal of Hand Surgery* 5.3 (1980): 226-241.
- Beaty JH and Kasser JR. "The elbow: Physeal fractures, apophyseal injuries of the distal humerus, avascular necrosis of the trochlea, and T-condylar fractures". In Rockwood and Wilkins' Fractures in Children, 7th Edition. Beaty JH, Kasser JR (Eds). Lippincott Williams & Wilkins, Philadelphia (2010): 533-593.
- Bland JM and Altman DG. "Statistical methods for assessing agreement between two methods of clinical measurement". Lancet 1.8476 (1986): 307-310.
- 13. "Growth Plate Fractures". orthoinfo.aaos.org, by the American Academy of Orthopaedic Surgeons (2014).
- 14. Sanders R., *et al.* "Operative treatment in 120 displaced intraarticular calcaneal fractures. Results using a prognostic computed tomography scan classification". *Clinical Orthopaedics and Related Research* 290 (1993): 87-95.
- Markhardt B., et al. "Schatzker Classification of Tibial Plateau Fractures: Use of CT and MR Imaging Improves Assessment". Radiographics 29.2 (2009): 585-597.
- 16. "Lower Extremity Trauma Board Review". OrthoConsult (2017).
- 17. "Peripheral Nerve Injuries".
- 18. Teisen H and Hjarbaek J. "Classification of fresh fractures of the lunate". Journal of Hand Surgery 13.4 (1988): 458-462.
- Scherne H and Oestern HJ. "A new classification of soft-tissue damage in open and closed fractures". Unfallheilkunde 85.3 (1982): 111-115.
- Abhaykumar S and Elliot DS. "Percutaneous plate fixation for periprosthetic femoral fractures: a preliminary report". *Injury* 31.8 (2000): 627-630.
- 21. Baek GH. "Duplication". In: Abzug JM, Kozin SH, Zlotolow DA, eds. The Pediatric Upper Extremity. New York, NY: SpringerVerlag (2015): 325-368.
- Winquist RA., et al. "Closed intramedullary nailing of femoral fractures. A report of five hundred and twenty cases". Journal of Bone and Joint Surgery. American Volume 66.4 (1984): 529-539.
- 23. Browner BD. "Skeletal trauma, basic science, management, and reconstruction". WB Saunders Co (2003).
- 24. Haraguchi N., et al. "Pathoanatomy of posterior malleolar fractures of the ankle". Journal of Bone and Joint Surgery. American Volume 88.5 (2006): 1085-1092.
- Aitken SA. "The epidemiology of upper limb, lower limb and pelvic fractures in adults". Department of Trauma and Orthopaedics, University of Edinburgh, Edinburgh (2013).

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