

#### 406 Bioabsorbable Screws in Scaphoid Fractures; a systematic review

A. Feeley<sup>1</sup>, I. Feeley<sup>2</sup>, C. Ni Fhoghlu<sup>1</sup>, M. Kennedy<sup>1</sup>, E. Sheehan<sup>1</sup>

<sup>1</sup>Midlands Regional Hospital Tullamore, Tullamore, Ireland., <sup>2</sup>Mater Misericordiae University Hospital, Dublin, Ireland

**Background:** Scaphoid fractures account for 90% carpal injury. Due to the limited vascular supply achieving adequate reduction and healing is important to avoid complications including avascular necrosis. Recent technological advances have led to renewed vigour in bioabsorbable material research to develop devices which could be used without the need for removal and complications including stress shielding and suboptimal imaging.

**Method:** A systematic review was made using PubMed, Ovid Medline, and Google Scholar databases according to PRISMA guidelines.

**Results:** Initial search results yielded 852 studies. 124 studies were screened, resulting in 7 studies which were included in this review. The level of evidence of studies ranged between III-IV of low power. Analysis demonstrated mixed findings with generally comparable outcomes to traditionally used screws. Heterogeneity of studies prevented a meta-analysis.

**Conclusions:** Development in bioabsorbable materials has yielded promising results in orthopaedic studies, however there is a dearth in research using these devices in the scaphoid. Further robust research is needed to establish the efficacy and applicability of bioabsorbable devices in the scaphoid bone.