



## AB131. Magnesium-based absorbable compression screws for triplanar ankle fractures: a case series

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**Background:** Tri-planar ankle fractures in paediatric patients present a challenge to orthopaedic surgeons. Injury to the growth plate can cause growth arrest. Satisfactory screw fixation is often necessary. However, these screws used usually need to be removed to prevent further potential growth arrest. This means additional operations, general anaesthetics and hospital days. Magnesium-based absorbable compression screws allow fixation without the need for removal. We present a case series of five tri-planar ankle fractures treated at a single trauma centre.

**Methods:** A retrospective chart review of all paediatric patients or skeletally immature patients (aged 16 or under) treated with Magnezix screws for triplanar ankle fractures.

Outcomes included: satisfactory reduction and fixation at twelve weeks post-op, wound complications, fixation failure, post-operative complications.

**Results:** A total of five tri-planar ankle fractures were treated with absorbable magnesium screw fixation (n=5). The mean age of these patients was 12.8 years (+/-1.8), three female (n=3) and two male (n=2). All were reduced with satisfactory fixation. No wound complications of any other complications were noted. All patients made a full recovery to pre-injury levels of activity. At twelve weeks post-operatively, all magnesium-based screws were showing signs of resorption.

**Conclusions:** Conclusions from this single-centre study are that magnesium-based absorbable screws are a safe option for use in the paediatric trauma population. These compression screws offer satisfactory fixation and also do not need to be removed at a later date. This precludes the need for additional surgical procedure to remove the screw. Not only does this reduce risks for patients, but presents a financial saving for already stretched health systems.

**Keywords:** Ankle; paediatrics; tri-planar; magnesium

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