A SYSTEMATIC REVIEW OF ANTIBIOTIC USE IN MAXILLOFACIAL TRAUMA

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Background
Maxillofacial trauma management is widely researched in the literature, particularly in terms of operative and non-operative management strategies. Postoperative intravenous antibiotic cover for these patients is widely practiced, yet evidence-based support of this practice remains controversial. The author of this piece hypothesised that the use of postoperative intravenous antibiotics following operative management of maxillofacial trauma does not show a clinically significant reduction in postoperative infections.

Methods
The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) and Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) methods were undertaken to analyse papers published within the last ten years across three databases, PubMed, Medline and Chocrane Library. The database search was limited to randomised controlled trials (RCTs) and cohort studies. The primary outcome measured was the incidence of postoperative infection.

Results
Limited trials were located across all databases. The evidence supporting the use of postoperative antibiotics was greatly confounded by low power randomised controlled trials. One paper found a statistically significant improvement in postoperative infection rate in mandibular trauma surgery.

Conclusions
The use of postoperative intravenous antibiotics following facial trauma remains poorly equated in the literature. Few high quality trials exist in this field, with limited statistical power. The use of postoperative intravenous antibiotics in mandibular trauma surgery has some evidence-based merit but data is severely lacking. The use of postoperative antibiotics in mid face and orbital trauma is, at present, not supported by the literature.