



AB258. Systematic review of post-operative infection rates in minor orthopaedic procedures: are antibiotics the difference?

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Background: Prophylactic antibiotic use has been commonplace in orthopaedic surgery since they have co-existed in efforts to prevent post-operative complications. Their use in total joint arthroplasty of the knee and hip, as well as open fractures in particular has been shown to be efficacious, their necessity in minor procedures such as Kirshner-wire (K-wire) or plate fixation of the foot or hand remains uncertain. We wanted to analyse the evidence for use of prophylactic antibiotics in minor orthopaedic procedures and whether using antibiotics in these cases resulted in lower infection rates compared to standard aseptic technique alone.

Methods: A literature search was performed using PubMed, EMBASE, Web of Science and Cochrane Library databases. We chose articles based upon the search terms “antibiotics” and “orthopaedics”, and chose only papers relating to minor orthopaedic procedures; K-wiring (or other percutaneous pinning) and plate fixation of fractures, and removal of surgically inserted metal.

Results: Infection rates were non inferior in cases of K-wire fixation of the humerus, hand and foot as well as in removal of surgical metal, where antibiotics were not used as prophylaxis. In open reduction and internal fixation (ORIF) of the ankle, infection rates were higher in the group without antibiotic prophylaxis.

Conclusions: Antibiotic prophylaxis is warranted for ORIF of the ankle, but the evidence does not support their use in K-wire fixation of the hand, humerus or foot. In removal of surgical metal, an randomized controlled trial (RCT) of 477 patients concluded that antibiotics were not warranted.

Keywords: Antibiotics; prophylaxis; orthopaedic surgery; wound

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