

**Number & Title:** 11332 : 'Topical vancomycin – Does it reduce surgical site infection in bone tumors?'

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**Background:** Surgical site infections (SSI) often necessitate multiple surgeries and prolonged antibiotic treatment leading to increased morbidity and cost. An appropriate perioperative antibiotic regimen can play a vital role in reducing SSI but there is little consensus regarding this when it comes to bone tumor surgeries. Current clinical practice is highly varied, with respect to antibiotic type, duration and mode of administration.

**Purposes:** We retrospectively analysed a consecutive group of patients operated for bone tumors of extremity and pelvis who received only perioperative antibiotics (Group A) against a similar group that had additional one gram topical vancomycin sprinkled in the wound prior to closure (Group B). The aim was to determine if addition of topical vancomycin decreases the incidence of deep surgical site infection (SSI).

**Materials and Methods:** Two hundred and twenty one patients operated between Jan 2011 and Dec 2011 were analysed in Group A and 254 patients operated between April 2012 and March 2013 were analysed in Group B. Any patient who required operative intervention for wound discharge was considered to be infected. All patients had a one year follow-up to determine the incidence of SSI.

**Results:** The overall rate of SSI was seven percent (31 of 475 patients). 17 (8 %) of Group A patients had SSI as against 14 (6 %) of Group B patients ( $p = 0.337$ ). A subgroup analysis of endoprosthetic reconstructions, internal fixation implants (plates / IM nails), Extra-corporeal radiation treated bones and strut allografts showed no difference between the two groups of patients.

**Conclusion:** Our data suggests that the addition of topical vancomycin prior to wound closure in patients operated for bone tumors does not decrease the incidence of surgical site infection. Further investigation of this technique using a case-controlled methodology with an increase in the dose of vancomycin may be warranted.