

The impact of smoking, diabetes and the site of surgery on post-operative infection in foot and ankle surgery: a prospective cohort study

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Category: Diabetes

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Introduction/Purpose: Smoking and diabetes are thought to increase the risk of post-op infection. Surgery on the hindfoot and ankle is also thought to carry an increased risk. This study looks at whether this is demonstrated in a cohort of patients undergoing foot and ankle (F&A) surgery.

Methods: Six hundred and twenty patients underwent F&A surgery between 2013 and 2016. Patients either underwent surgery electively (group 1; n= 383) or had open reduction and internal fixation for ankle fracture (group 2; n= 237). Data was collected on patient demographics, site of surgery, smoking and diabetes. The primary outcome was the rate of surgical site (SSI) and deep infection. A standard statistical online package was used for statistical analysis.

Results: The mean age was 50.8 years and the standard deviation was 17.1 years. The incidence of SSI was 4.2%; 0.48% developed a deep infection. There was no significant difference in infection prevalence between group 1 and 2 ($p = 1.0$). When comparing the site of surgery, no significant differences were found for forefoot, midfoot, hindfoot or ankle surgery ($p=0.16$, $p=0.22$, $p=1.0$, $p=0.48$ respectively). There was no significant difference in the prevalence of smoking or diabetes in those who developed an SSI in the overall cohort ($p=1$, $p=1$) or in separate analysis within groups 1 and 2 ($p=1$).

Conclusion: Both trauma and elective patients had a similar rate of SSI and deep infection; neither diabetes nor smoking had an impact on this rate. For elective patients, there wasn't a relationship between site of surgery and infection incidence. However, due to the low SSI rate, group sizes were small for this comparison. There was no increase in the incidence of SSI in hindfoot or ankle surgery contrary to common belief.

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