Smoking increases likelihood of infections in trauma patients

Friday 6 May, 2016

A four year study of more than 300 Queensland trauma patients has shown that smokers and patients with comorbidities are at increased risk of developing an infection following surgery.

Post-operative infection is particularly problematic in trauma patients requiring metal plates or prosthetics because it may require the whole operation to be done again.

Dr Andrew Lewandowski from the Gold Coast University Hospital says that being a smoker increases your chances of getting bone infections if metalwork has been used to fix fractures.

“We know that smoking even one cigarette constricts your small blood vessels, particularly at the site where a fracture is healing, reducing blood flow and the capacity of the body to heal,” Dr Lewandowski says.

“Smoking has been shown to drastically increase the time for all surgical wounds to heal, and is often a reason surgery is cancelled in an elective setting.

“Unfortunately when treating fractures in an emergency we can't completely stop people from smoking and so we see high rates of infections in these patients.

“Our study focused on fractures of the upper and lower limbs where a tourniquet was used in the surgery, and we found that the timing of antibiotic administration was also a big factor in whether patients developed a post-operative infection.

“Antibiotics need to be circulating in the blood before surgery begins, and in orthopaedic surgery where a tourniquet is used, there often isn’t time for the medicine to fully circulate in the limb before blood supply is cut off.

“We found that rates of infection were reduced when antibiotics were administered between 11 and 30 minutes before tourniquet inflation.

“It is hoped that these findings will allow us to alter clinical practice to reduce rates of infection following trauma surgery, but it is another reminder for people to quit smoking to avoid serious health complications.”

Dr Lewandowski is presenting his findings at the Royal Australasian College of Surgeons Annual Scientific Congress in Brisbane this week.

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