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Incidence of prosthetic graft infection following lower limb and open AAA repair surgery at the Manchester Vascular Centre

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ABSTRACT

BACKGROUND

Prosthetic graft infection is a major complication of vascular surgery. Infection is associated with higher morbidity and mortality along with prolonged hospital stay. We investigated the incidence of prosthetic graft infections within a tertiary vascular centre over a 40 month period, from 2016 to 2019.

METHOD

This is a retrospective cohort single site study of prosthetic vascular grafts involving the lower limb, abdominal and axillary arteries. The primary objective was to find the incidence of vascular graft infection in patients undergoing graft procedures at the Manchester Vascular Centre. The outcome of each prosthetic graft infection was evaluated. Patient age, location of graft, type of prosthetic material and pathogen isolated were recorded. Data was extracted from the vascular activity log.

RESULTS

Of the 427 graft procedures performed between 2016 and 2019, 254 prosthetic grafts were identified. Procedures

included were axillo-femoral, abdominal aorta and all lower limb interventions.

There was a graft infection incidence rate of 4.7%. Patient outcomes ranged from recovery with antibiotic therapy, surgical intervention, amputation and death. The most common pathogens isolated were *Enterococcus faecalis* and *Staphylococcus aureus*.

DISCUSSION

The incidence of prosthetic graft infection identified here is 4.7%. After review of available literature, we have only been able to identify some studies which have looked at some but not the entire range of graft areas, notably we included abdominal aortic aneurysm repairs. The incidence of prosthetic graft infection at our centre may be a reflection of the wide anatomical range of prosthetic grafts considered but may also reflect the significant burden of smoking, illicit drug use, diabetes and chronic kidney disease in our patient population.

KEY MESSAGES

Prosthetic graft infections lead to significant morbidity, mortality and overall poor outcome for patients. Further research is needed into factors contributing to these adverse outcomes so that effective measures can be taken to improve end results.