

Antibiotic use, incidence and risk factors for orthopaedic surgical site infections in a teaching hospital in Madhya Pradesh, India

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Conclusions

In total, 7.6% of patients developed surgical site infections (SSIs) over 3 years. Male sex, previous hospitalisation, antibiotic prescription during hospitalisation before perioperative antibiotic prophylaxis (PAP), postoperative length of stay (LOS) >15 days and preoperative shower were identified as significant risk factors.

Introduction

Orthopaedic surgeries contribute to the overall SSI events worldwide. Identification of the SSI incidences and risk factors in orthopaedic surgery wards supports overall measures to prevent and mitigate SSIs in hospitals. In India, SSI rates vary considerably (1.6- 38%); however, there is a lack of a national SSI surveillance system.



Arthroscopy surgery. <https://rb.gy/cwvaok>

Aim

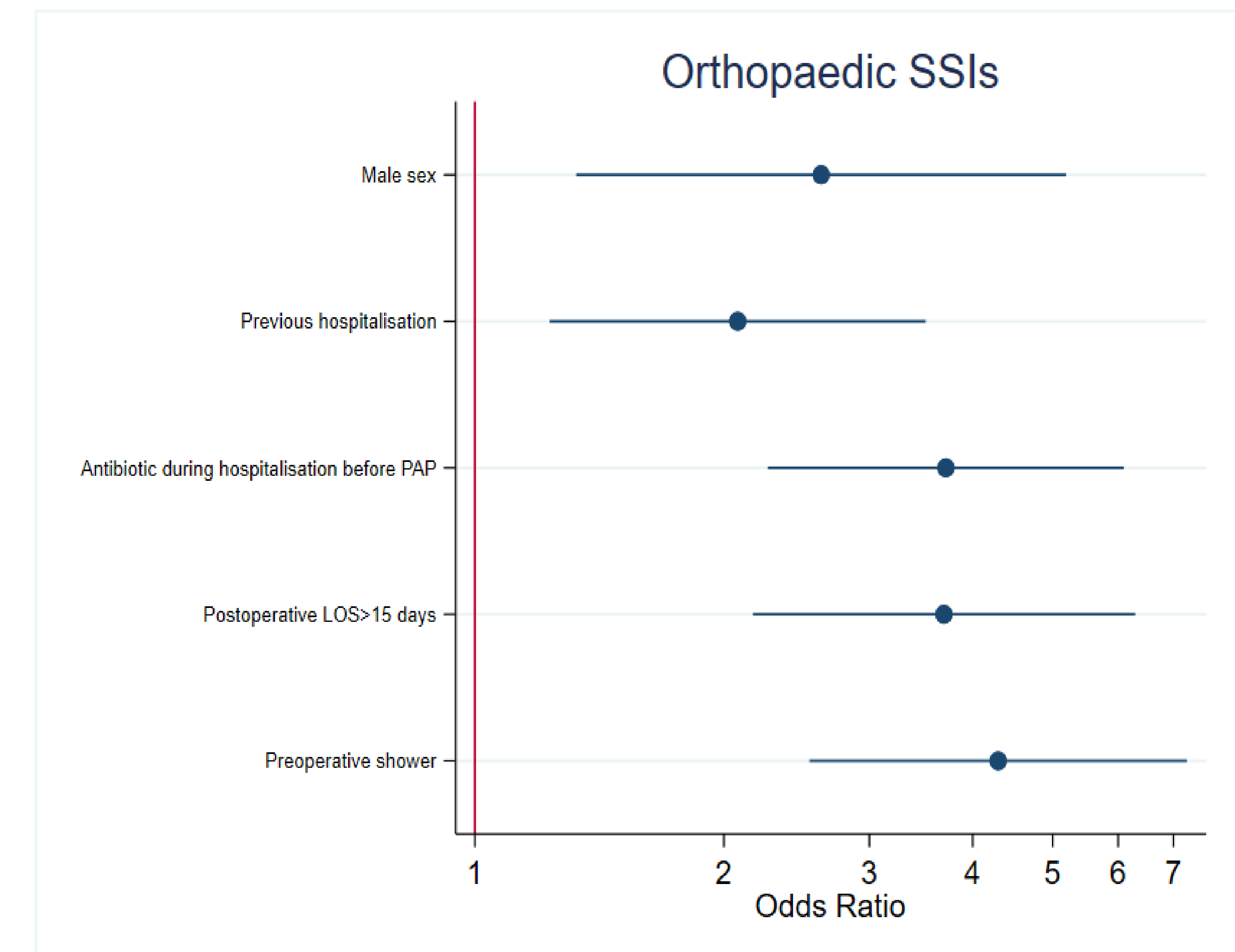
To identify the SSI incidence, risk factors, antibiotic prescription and susceptibility patterns among orthopaedic patients in a teaching hospital in Central India.

Methods

Data for 1205 patients were collected from 2013-2016. SSIs were identified based on the Centers for Disease Control and Prevention (CDC) guidelines. The American Society for Anesthesiologists (ASA) classification system was used to predict patients' operative risk. Univariable and multivariable backward stepwise logistic regressions were performed.

Results

The most common SSIs causing microorganism was *Staphylococcus aureus* (7%), whose strains were resistant to penicillin (100%), erythromycin (80%), cotrimoxazole (80%), amikacin (60%) and cefoxitin (60%). Amikacin was mostly prescribed antibiotic (36%).



Significant risk factors for orthopaedic SSIs

Key message

Preoperative shower is a new risk factor, unconfirmed in the literature so far. Further studies are needed to explore possible reasons behind it.



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