

**P2730 SSI in cardiac surgery: Is it time to re-look into the choice of pre-surgical antibiotic recommended?**

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**Background:** Surgical site infection (SSI) in cardiac surgery increases mortality, morbidity, cost of medical care and length of hospital stay. Most studies from industrialized countries show a predominance of Gram positive organisms causing SSI's of cardiac surgery, but may not apply for BRIC countries. We analysed our incidence of SSI from cardiac surgery from a BRICS country ( Brazil, Russia, INDIA, China, South Africa) and compared them with published results from industrialized countries.

**Materials/methods:** We analyzed data from all consecutive patients from 01/2014 to 10/2018 from a leading cardiac center in Chennai, India. CDC definitions and classifications were used for this study. Pathogens were isolated by standard methods in clinical Microbiology and identified with susceptibility testing on Vitek (bioMerieux, France) with the latest CLSI guidelines.

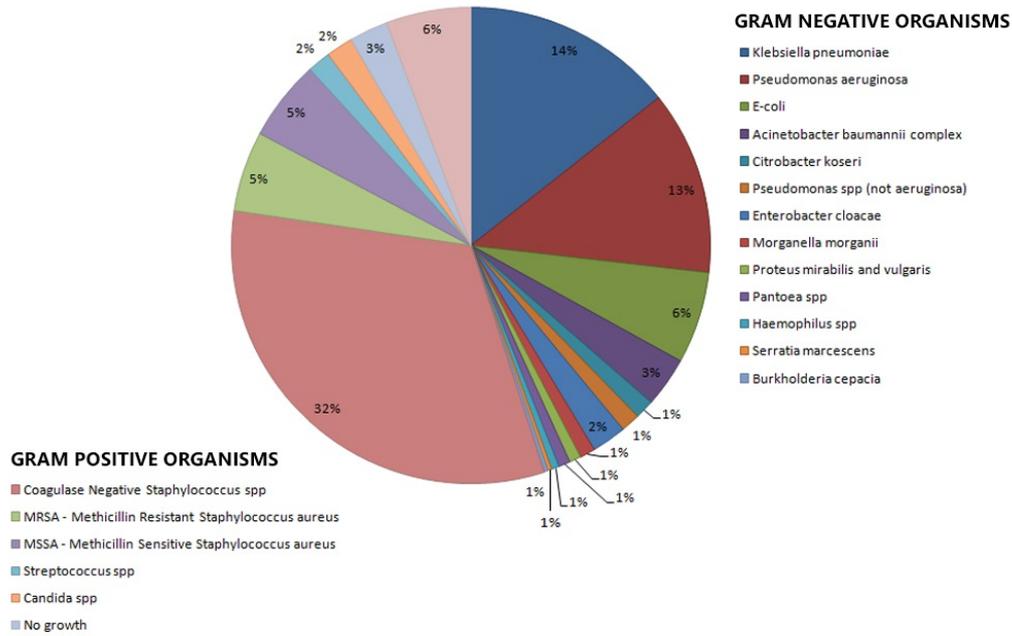
Our centre had a NNIS score of 0 or 1 in 95% of the cases. Data was collected, analysed on monthly basis. The cumulative data over 5 years was analysed by SPSS IBM v21 where continuous variables were represented as frequencies and percentages and categorical data was compared using chi square with a  $p < 0.05$  being significant.

**Results:** A total of 10,062 cardiac surgeries were performed in adults during the study period: 95% had NNIS scores between 0 and 1. First or 2<sup>nd</sup> generation cephalosporins were the most common antibiotics (80%) used followed by glycopeptides (16%). 2.42% experienced a SSI with 55% being male patients. Sternal site infections were more common with 228 (93.44%) patients and 63 (25.8%) had leg wound infections from harvesting the vein. Superficial wound infections were seen in 106 (43.4%) patients and deep wound infections were seen in 169 (69.2%) of the patients

Gram negative organisms accounted for 45% of the organisms isolated with 27% being from the *Enterobacteriaceae* family and 16% being nonfermentors such as *Pseudomonas aeruginosa* and *Acinetobacter baumannii* complex (Fig-1)

**Conclusions:** Pathogens isolated from SSI in India differ considerably from industrialized countries. International guidelines such as WHO should account for such differences between countries to meet the goal of prophylaxis, to cover the most likely pathogens encountered during cardiac surgery.

## SPECTRUM OF ORGANISMS CAUSING SSI IN CARDIAC SURGERY



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FIGURE 1: SPECTRUM OF ORGANISMS CAUSING SSI IN CARDIAC SURGERY

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