

Rapid Fire Papers 1

[O38] RISK REDUCTION ON PJI WITH *S. AUREUS* ERADICATION THERAPY IN THA

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Aim: Prosthetic joint infection (PJI) is a major complication in THA. Nasal carriage with *S. aureus* is a well-defined risk factor for infection in hospitalized patients. Risk for infection is reduced up to 50% by eradication therapy. Since PJI rates are very low and only 25% of the population are carriers, significant differences are hard to show and reports on PJI have been inconclusive. We analyzed the effect of *S. aureus* eradication therapy in THA.

Methods: From 2011, patients receiving THA are screened for *S. aureus* carriage and carriers are treated. This group was retrospectively compared with a historical THA group in which no screening and eradication therapy was done. We assumed similar carrier rates in both groups and calculated the risk reduction of eradication therapy for PJI in comparison to the historical carriers without treatment. Fisher's Exact test was used to compare outcome.

Results: 2072 patients were screened and 478 patients were positive (23%). The historical control group consisted of 1248 patients, with 288 calculated carriers (23%). 15 PJI (0.72%) occurred vs 14 (1.12%) in the historical group ($p=0.16$). A 52% reduction in *S. aureus* infections was found (0.33% vs 0.64% $p=0.15$). Infection rates for PJI caused by *S. aureus* was similar in non-carriers and carriers after eradication therapy (0.3 vs 0.4% $p=0.506$). The calculated infection rates in carriers in the historical group was reduced from 2.6% to 0.8% (RR 3,25, $p=0.07$) by eradication therapy and from 1.7% to 0,4% (RR 4,25, $p=0.07$) for *S. aureus* PJI.

Conclusions: A clear trend in reduction of PJI was demonstrated as a result of *S. aureus* screening and eradication therapy, reducing the rate of PJI for carriers to the same level as non-carriers.