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Abstract Discussion Forum **(0)**

**Number: Mo1264**

ANTIBIOTIC PROPHYLAXIS IN ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY TO PREVENT RELATED COMPLICATIONS: A META-ANALYSIS

**Society:** AGA

**Track:** Clinical Practice

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**Background:** The incidence of infection after endoscopic retrograde cholangiopancreatography (ERCP) generally varies between 0.01% and 1.4% but can be as high as 18% in cases of biliary obstruction. Antibiotic prophylaxis is not routinely recommended for most patients as their clinical use remains controversial. The present meta-analysis was conducted to evaluate the impact of antibiotic prophylaxis in ERCP on the risk of bacteremia, pancreatitis, and cholangitis.

**Methods:** We performed a systematic literature search of English language articles from inception to June 2024 in Pubmed, Medline, and Cochrane databases. The following terms (â€œEndoscopy OR Endoscopicâ€□) AND ("Antibiotics OR Antibiotic OR Anti-Bacterial Agent OR Antibacterial") were combined as either keywords or Medical Subject Headings (MeSH). Only randomized controlled trials (RCTs) with a control group (without the use of antibiotics) and a prophylaxis group (with the use of antibiotics) in separate arms of the study were included in the analysis. Risk ratios were pooled using a random-effect model, and a p-value of <0.05 was considered statistically significant.

**Results:** Nine RCTs with 1786 patients (893 with antibiotic prophylaxis vs 893 with non-antibiotic prophylaxis) were involved in the final analysis. The mean age of the patients in both groups was comparable (43 vs 35.5 years in the antibiotic prophylactic and non-antibiotic groups, respectively). The male prevalence between the two groups was also comparable (38.7% and 37.8% in the antibiotic prophylaxis and non-antibiotic groups, respectively). The pooled analysis of primary outcomes showed that compared to non-antibiotic prophylaxis, the risk of bacteremia was significantly lower in the pre-procedural antibiotic prophylaxis group (RR 0.36, 95% CI 0.17-0.76; P=0.008). The pooled analysis also showed that although the risk of pancreatitis (RR=0.65, 95% CI 0.26 â€“ 1.65; P=0.36) and cholangitis (RR=0.55, 95% CI 0.24 â€“ 1.27; P=0.16) trended in favor of antibiotic prophylaxis, this did not reach statistical significance.

**Conclusion:** Pre-procedure use of antibiotic prophylaxis in patients undergoing ERCP can lower risk of bacteremia, however their use may not have an impact on the risk of cholangitis or pancreatitis.

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Adarsh Jha

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