European Respiratory Society
Annual Congress 2013

Abstract Number: 2274

Publication Number: P1876

Abstract Group: 1.1. Clinical Problems

Keyword 1: COPD - management **Keyword 2:** COPD - exacerbations **Keyword 3:** No keyword

Title: Can antibiotics prevent acute COPD exacerbation? A systematic review and meta-analysis

Dr. Haris 17804 Riaz harisriaz73@yahoo.com MD [1], Tanvir 17805 Abir abir_tanvir100@yahoo.com.au [2], Dr. Madiha 17806 Rahman dr.madiharahman@gmail.com MD [1], Dr. Anis 17807 Rehman anisramay@gmail.com MD [1], Dr. Amin 17808 Kapadia aminkapadia@live.com MD [1] and Dr. Talha 17809 Riaz riaztalha@yahoo.com MD [1]. [1] Internal Medicine, Dow University of Health Sciences, Karachi, Sindh, Pakistan and [2] School of Medicine, University of Western Sydney, Sydney, Australia .

Body: Objective: To determine if antibiotics are efficacious in stable COPD. Methods: Pubmed, embase and cochrane database of controlled trials were searched from inception to december 2012. Quality assessment was done as per cochrane collaborations tool.

The extracted data were then computed using STATA software. We converted the estimates to the common metric of a relative risk, since all studies compared two groups and reported binary outcomes. RRs were pooled and we calculated average RRs across measures within each study and used the average estimate in cross-study meta-analysis. Results Of 3912 articles searched, 8 RCTs met the inclusion criteria. The overall estimate revealed that antibiotics (azithromycin, clarithromycin, levofloxacin) have a significant role in preventing acute exacerbation (Relative Risk = 0.702, 95% confidence interval (CI) 0.632 – 0.781, P < 0.001).

The test for heterogeneity was Q= 4.143 on 7 degrees of freedom (p= 0.763). Conclusion: There is statistical evidence of the superiority of antibiotics in reducing the frequency of acute exacerbation in stable COPD warranting identification of patient groups most likely to benefit.