Rationale: Aspirin-exacerbated respiratory disease (AERD) is a triad including nasal polyposis, asthma, and NSAID sensitivity. The effects of anti-IL-5 treatment on the severity of aspirin-induced reactions are unknown.

Methods: This was a retrospective chart review of the 3 patients with AERD in our clinic who had undergone aspirin challenge or desensitization while on treatment with mepolizumab.

Results:
- Two Caucasian females and one black female with AERD, ages 38-49y, underwent oral aspirin desensitization after being treated with mepolizumab for 3-13 months.
- The patients’ AERD had been diagnosed between 2-25 years prior, with 1-2 sinus surgeries prior to the desensitization.

Patient #1: Aspirin-induced reaction included nasal congestion, headache, itching, and rhinorrhea with a drop in FEV1 of 12% from her baseline.

Patient #2: Aspirin-induced reaction included wheezing on lung exam with no change in her FEV1 and the development of hives and pruritus of her upper body.

Patient #3: Aspirin-induced reaction included pruritus, nasal congestion, wheezing on lung exam with a drop in her FEV1 of 11% from her baseline, and protracted severe abdominal pain and vomiting, for which IM Epinephrine was administered and a tryptase, drawn 7 hours after the onset of symptoms, was 19 ng/ml.

Conclusions: Based on this case series, we conclude that patients with AERD who are on anti-IL-5 treatment with mepolizumab can still develop aspirin-induced reactions, including severe and systemic symptoms. Further controlled research is warranted to determine if anti-IL-5 treatment may lessen or change the reaction symptoms.