

The AERD Center

at Brigham and Women's Hospital

Information for patients with aspirin-exacerbated respiratory disease (AERD) / Samter's Triad

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- Officially introducing our new Physician Assistant, lab technician, and patient coordinator

MESSAGE FROM OUR DIRECTORS

In part due to our education and outreach efforts, more and more centers across the United States are developing proficiency in AERD and aspirin challenges/desensitizations, which has led to increased availability of healthcare providers with expertise in diagnosis and management of the disease. Indeed there is much hope on the horizon, though still many challenges ahead.

With the information we gathered from last year's surveys, we were able to learn from all of you, and publish three important papers to help teach others:

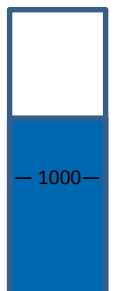
1. "Hearing loss and middle ear symptoms in aspirin-exacerbated respiratory disease", in which we showed that ear complications, eustachian tube dysfunction, and hearing loss are common in AERD.
2. "A Retrospective Analysis of Esophageal Eosinophilia in Patients with Aspirin-exacerbated Respiratory Disease", in which we showed that some patients on high-dose aspirin develop eosinophils in their esophagus.
3. "Accidental ingestion of aspirin and nonsteroidal anti-inflammatory drugs is common in patients with aspirin-exacerbated respiratory disease", in which we showed that about 1/4 of patients with AERD had accidentally taken an NSAID that caused a reaction.

– if you took part in one of these surveys, THANK YOU!
Drs. Tanya Laidlaw and Kathleen Buchheit

BY THE NUMBERS

Thanks to the support and participation of you all, we were able to surpass our goal of 1000 patients enrolled in the AERD registry. Currently we have 1,431 people in the registry, and we are expanding our goal to increase it to 2000 participants! We use the registry to send out surveys about new questions and updated information about the disease.

GOAL: 2000



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DUPIXENT FOR NASAL POLYPS

Dupixent (dupilumab) was recently FDA approved to treat Chronic Rhinosinusitis with Nasal Polyps (CRSwNP). Dupixent was already approved to treat atopic dermatitis and asthma in people 12 years and older. The medication is administered every two weeks by subcutaneous injection which patients can give to themselves at home. The drug is designed to block signaling of two proteins (IL-4 and IL-13) that contribute to type 2 inflammation in several chronic diseases including CRSwNP.

One trial gave 448 patients either dupilumab or placebo for 52 weeks. Those receiving dupilumab saw improvement in nasal congestion, lung function and quality of life. In addition, they had clear improvement in smell in as little as 4 weeks after starting the drug. Patients receiving dupilumab also did not need to use prednisone or other rescue steroids as often as the patients who were on placebo.

There is currently a phase 2 study investigating Dupixent as an add-on therapy for AERD that is estimated to be completed by August 2020 (ClinicalTrials.gov - NCT03595488). Our team here at Brigham and Women's Hospital is also doing an observational study on patients with AERD who are taking Dupixent.

POLYP 2 (XOLAIR) STUDY RESULTS

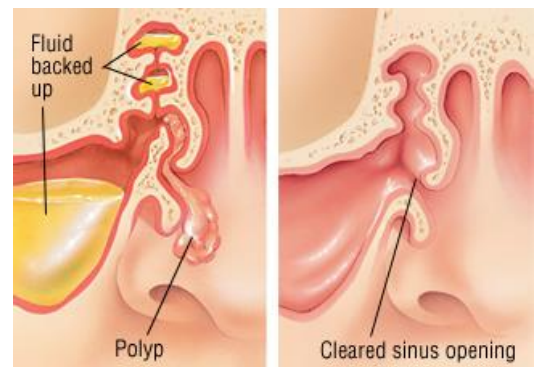
Preliminary findings from the Polyp 2 study our team participated in last year have recently been shared with the public. The purpose of the study was to find out if Xolair (omalizumab) would benefit people with CRSwNP. The drug, like Dupixent, is an injectable biologic. The medication works by targeting and blocking immunoglobulin E (IgE). Blocking IgE reduces the numbers of available IgE receptors which in turn reduces the amount of

mediators (biochemical molecules that intensify an inflammatory response) that are released during inflammation.

There were significant improvements in nasal congestion and nasal polyp score. Other outcomes the study data met were improvements in smell tests and in the SNOT-22 questionnaire. The results provide more support that IgE contributes to inflammation in nasal polyps. The drug developers plan to present the data to the FDA in hopes that Xolair will be approved to treat people with CRSwNP who do not experience therapeutic benefit from current options.

QUICK FACTS

In addition to decreasing congestion and nasal polyp burden, Dupixent showed great results for improving sense of smell and taste.



UPCOMING AND ONGOING CLINICAL TRIALS

UPCOMING CLINICAL TRIAL 1: GB001 for Nasal Polyps

In the fall, our team at Brigham and Women's will be one of several other sites across the country participating in a new study by Gossamer Bio Inc. The purpose of the study is to investigate the efficacy of a new drug, GB001, in patients with CRS with and without nasal polyps (Clinical Trials.gov-NCT03956862).

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GB001 works by blocking the interaction between PGD2 and the DP2 receptor. When the two molecules bind, it triggers the activation of molecules that lead to inflammation. By blocking the PGD2/DP2 pathway, GB001 may prevent inflammation.

In a Japanese Phase 2 study investigating the drug in patients with asthma, 158 patients received either the drug or placebo. Those who received GB001 developed less asthma worsening than those on placebo, but the drug did not increase lung function.

UPCOMING CLINICAL TRIALS 2 & 3: Etokimab for Eosinophilic Asthma and CRSwNP

AnaptysBio has two upcoming trials investigating the drug etokimab's efficacy in treating eosinophilic asthma and CRSwNP. Etokimab is an antibody that blocks IL-33 activity which is known to mediate the release of other molecules that lead to inflammation in diseases such as asthma. In an earlier trial studying the effect of the drug on eosinophilic asthma (ClinicalTrials.gov – NCT03469934), patients who received a single 300mg IV dose of the drug experienced an increase in their lung function that lasted through day 64 post-treatment. In addition, those patients also reported lower asthma symptoms on their Asthma Control Questionnaire and had fewer eosinophils (immune cells related to inflammation) in their blood after 64 days.

AnaptysBio has also expanded its development of etokimab into CRSwNP (ClinicalTrials.gov: NCT03614923). Previous research suggests that IL-33 may play role in the inflammatory response in CRSwNP. There is an ongoing Phase 2 trial with the first round of data expected later this year.

ONGOING CLINICAL STUDY 1: Dupilumab in Sleep Apnea

Researchers at Brigham & Women's Hospital seek volunteers with obstructive sleep apnea, and severe congestion and bilateral chronic rhinosinusitis to participate in a research study investigating how a medication may improve sleep apnea in some patients (ClinicalTrials.gov – NCT03675022). The study involves a screening visit, a home sleep test, two overnight stays in our sleep physiology laboratory, two sinus CT scans, and 4 months of dupilumab treatment along with follow up visits at the clinic. You will receive up to \$800 total for participating in this study.

In order to take part you must:

- Be diagnosed or suspect you have obstructive sleep apnea and not using CPAP
- Be diagnosed with bilateral chronic rhinosinusitis and have severe congestion
- Be 18 – 80 years old
- Have a BMI less than 35

For more information, please contact the study coordinator Lauren Hess at 617-732-8976 or lhess1@bwh.harvard.edu.

ONGOING CLINICAL STUDY 2: Ifetroban

If you would like to undergo an aspirin desensitization to help treat your symptoms, you may be eligible for a research study at Brigham and Women's Hospital testing a new medication for the treatment of AERD (ClinicalTrials.gov-NCT03326063).

The study drug, called ifetroban, inhibits the thromboxane receptor, which we believe plays a role in AERD. This drug has not yet been approved by the Food and Drug Administration (FDA). To qualify for the study, you have to be 18-70 years old, and have AERD and asthma. The study involves 3 visits over an 8-week period and involves an aspirin desensitization procedure, blood and

DID YOU KNOW?

AERD Awareness Day is September 26, 2019! Learn more at www.samterssociety.org

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nose fluid sampling, and urine tests. You will be seen by a medical doctor and will receive the study medication at no cost.

The purpose of this study is to find out if taking ifetroban will help treat the symptoms of AERD and prevent reactions to aspirin. Compensation is up to \$225.

For more information, please contact the Asthma Research Center at 1-888-99-ASTHMA (278462) or Dr. Tanya Laidlaw at tlaidlaw@partners.org.

Deborah Gakpo

Deborah completed her undergraduate education in May of this year from Hamilton College where she double majored in Biology and Dance and Movement Studies. She then joined the team as the AERD patient coordinator where she oversees ongoing clinical trials.



STAFF CHANGES

Jillian Bensko, PA-C

Jillian graduated from Skidmore College with her undergraduate degree in Health and Exercise studies. She then worked in the Asthma Research Center here at Brigham and Women's Hospital as a research assistant, working on AERD studies. She went on to earn her Master's in Physician Assistant Study from Providence College in 2017. Jillian joined the team in March of this year and oversees new research projects and coordinating new patients. She sees patients on Thursdays at 850 Boylston Street and Fridays at 60 Fenwood Road.



Erin Lewis

Erin graduated with her undergraduate degree in Chemistry from Hamilton College in 2018. After graduation, she joined the team as lab technician. She is responsible for analyzing, managing and storing all biological samples collected by the AERD team.



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