Dupilumab, a Miracle Drug For Eczema. And Now Asthma, Too.

By Josh Bloom — May 24, 2018

(Disclaimers: My IRA contains a pitifully small amount of Regeneron stock. ACSH gets no funding from the company. I also am a patient who takes the drug I will be discussing.)

It is hardly news when people complain about drug prices, and since we have entered the age of biologicals (1) prices have gone higher faster, but so has the value. There can be no better example of this than that of dupilumab, (Dupixent, Regeneron Pharmaceuticals/Sanofi). It is about as close to a miracle as you'll ever see in the world of medicine.

I have written before [2] about dupilumab, which act by inhibiting interleukin-3 and interleukin-4, two cytokines which are responsible for the hyperimmune response in the skin that causes eczema - inflamed, dry, itchy skin that ranges from mild to severe. When it’s severe it can have a profound effect on the quality of life, especially during flare-ups, which occur periodically in most eczema sufferers. Flare-ups are not just unpleasant; they can be disabling.

Sometimes the hardest thing about having chronic eczema is that I feel ugly. I mean, really really ugly. People will often stop me to ask me what is wrong, have I had an accident, was I burnt. I can tell people are trying to look at my eczema without making it obvious and the tone in their voices when they tell me my skin isn’t looking too bad today is heavy with sympathy.
Until dupilumab was approved in 2017 there were a number of options available for eczema sufferers, all bad. Prolonged use of strong steroid cremes is terrible for your skin, and it also penetrates it, so the steroid ends up in your blood. Phototherapy (UVA/UVB) can be helpful but increases the chance of skin cancer. Moisturizers help a bit but don't affect the underlying inflammation. Antihistamines don't work. Sometimes people take baths in bleach. Not as pleasant as it sounds.

Now, let's take a look at drugs.com [3] and see what some people who have used dupilumab have to say about it (2).

"I love Dupixent! Before I started injections I was beyond miserable. If there's a worse word for it... the itch started to cease quickly and all of my eczema patches started to dry up and peel off... I never thought I'd be able to look myself I'm the mirror and not cry. I rejoice quite often because I have a normal life again."

"I've been suffering from eczema my entire life. In the past few years I've had major break outs, really major. You know, the ones when you can’t sleep, stop scratching, and you’re covered in sores. Nothing works... I’ve taken Dupixent 5 times so far... and it’s been a miracle for me... I'd LOVE to kiss the manufacturer AND work for the company as a spokesperson. There aren't enough stars to rate Dupixent as high as I want to. It really is magical unicorn fairy dust!!"

"This drug has changed my life. I seriously could kiss the manufacturer... Dupixent has been life changing. I haven’t had an outbreak at all after 3 injections. I’m happy, not depressed, not itchy and not a hermit. This drug has been a godsend. After so many years of not knowing and trying to manage this, it’s finally under control"

Pay special attention to this one:

"[In addition to eczema] I also suffer from hideous asthma (of course) and my side effect from Dupixent has been NO asthma episodes! Already! I feel like I'd imagine a normal person feels. I CAN BREATHE AND DO THINGS! And I’m not dying of asthma attacks all the time."

The miracle drug just got better. Dupixent will almost certainly be approved for severe asthma, probably this year. The same inflammatory mechanisms (3) that trigger eczema also trigger asthma. And Dupixent takes care of both of them. A recent article in Medical News Today [4] makes this clear:

- In a one-year, randomized double-blinded [5] study of about 1900 people with moderate to severe asthma, all of whom required three different kinds of inhalers to control their asthma, the participants were divided into two groups. One group got dupilumab, and the other placebo (but they kept using the inhalers).

- The dupilumab patients had an increased ability to exhale (4) as well as other improvements.

Anon
in lung function.

- In the control group 6.5% of the participants had to visit an emergency room during the year. For those who received dupilumab that number was 3.5%.
- A second study [6], which was 24 weeks in duration, consisted of 210 participants with severe asthma, all of whom used oral steroids - something that should be avoided if at all possible. (See Prednisone: Satan's Little Helper [7]) in addition to the inhalers.

Fifty percent of those asthmatics receiving dupilumab were able to be weaned off the steroids entirely.

Eighty percent were able to cut their steroid by half.

If this isn't a miracle drug, then nothing is. It takes care of two problems at once, one life-threatening and the other life-ruining. And the price is quite reasonable compared to that of other biologicals - $37,000 per year, and patient assistant programs can cut the co-pay to zero (5).

Next time you rail about the "evil" pharmaceutical industry, take a deep breath and think about what Regeneron and Sanofi have accomplished for very ill patients. They will now be able to take a deep breath as well.

Notes:

1. Biologicals are drugs that are made by living organisms, proteins, antibodies, vaccines, etc. Since they cannot survive the conditions in the stomach (with rare exceptions) they must be given by injection. Biologicals are more difficult to manufacture and almost always more expensive than pills.

2. These quotes are (obviously) from patients for whom the drug worked well. It drug does not work for everyone and some people experience side effects, most notably serious conjunctivitis. On the same page, there are people who rated the drug poorly, but most rated it highly.

3. Asthma, eczema, and hay fever often occur together in people with severe allergies. This is referred to as an atopic triad. It's no fun.

4. It may be counterintuitive, but asthmatics have more trouble exhaling than inhaling. This is one of the hallmarks of the disease.

5. I am atopic and have been taking Dupixent for a few months. My eczema, which had plagued me my whole life is entirely gone. I still can't believe it. It has not been as effective with my asthma. It took one call to the company to be enrolled in the patient assistance program. I pay nothing. I am damn lucky.