

A typical patient whom I would start on a biologic therapy for atopic dermatitis in the pediatric age group would be basically any child that's refractory to optimal topical therapy. So for example, let's take a six-year-old who has failed the strongest steroids I would like to use. And for six-year-olds, I usually try to go to steroids that are indeed approved in pediatrics.

And I will say that my favorite go-to topical steroids have been mometasone, which is absorbed less than other steroids. It's also kind of easy. It's put on once a day. Fluticasone, which, once it gets through the skin, is immediately converted to an inactive metabolite. So it's so-called soft molecule. So those are my favorite go-to topical steroids.

Patients not doing well with those, I add [INAUDIBLE] inhibitor and/or a topical [INAUDIBLE] inhibitor. And by the way, for the face, groin, and [INAUDIBLE], I start out with a [INAUDIBLE] inhibitor or a topical [INAUDIBLE] inhibitor. And if the patient is not doing well under those circumstances or simply, their body surface area is too great to apply a topical-- and I'm assuming that the child is avoiding irritants, avoiding harsh soaps, not over washing.

If the skin is [INAUDIBLE], they're doing bleach baths, they're doing all the right easy things, they're using moisturizers appropriately, and if they're still suffering, then my next step used to be to go to either phototherapy, which was unsatisfying because it didn't work that well, or to cyclosporine, which worked real well but required a lot of blood testing, which children don't like, and which require required me worrying about their kidneys and their blood pressure and so on.

And I will say children tolerate cyclosporine better than adults. So they have fewer side effects. Nonetheless, you can't ignore their kidneys. And so-- because even children can get in trouble kidney wise with cyclosporine. So once dupilumab was approved, pretty much, we went right from topical therapy to dupilumab.

When it first came out, it required fighting with insurance companies. We wrote letters saying, first of all, all the drugs you're asking me to use aren't approved. And they're dangerous. And this drug is approved that it's not dangerous. Now that occurred with adults. Once it's approved in children, I'm expecting that to occur in children as well.

So today, we have no resistance from insurance companies on prescribing dupilumab for adults, at least not in the New York area. I understand that in certain states, it has been a little bit more of a problem. But it's easy to win that fight because, honestly, the side effects of systemic steroids in children, by the way, systemic steroids are associated with failure to thrive and can cause premature closure of [INAUDIBLE] so they actually make the children shorter.

So there are a lot of reasons not to use steroids. Systemic steroids are approved for atopic dermatitis. All of the other immunosuppressants that I mentioned are not approved, not in the United States, at least. So I would go right to dupilumab. We have actually used dupilumab off label in pediatrics. And it is remarkably effective, as it is in adults. And I think we've really changed the lives of patients.

If you look at data on children with bad atopic dermatitis, not only are they suffering, but their families are suffering. A high incidence of divorce among the parents of children with atopic dermatitis. Nobody in the family sleeps because the kid is up scratching all night. And it's miserable.

It affects their interaction with other children. And it allows them to socialize better if we make their skin normal with a safe treatment. And that's what dupilumab does. So it's really changed the lives of these patients for the better.