The standard treatment for bad exacerbations of pediatric (and adult) asthma has been five days of prednisone. But kids vomit prednisone, even if you specify Orapred, the brand least likely to be vomited:


A recent meta-analysis showed that dexamethasone single dose (usually 0.6 mg/kg, max 16 mg) is not inferior to the standard 5 days of prednisone, and has fewer side effects:


This is nice for us, as MedExpress stocks dexamethasone, and can give a single dose of this for asthma exacerbations here in the clinic, rather than a prescription. This will likely improve patient satisfaction. I've certainly had lots of complaints of prednisone causing insomnia and "nerves."

We also know that oral steroids are as effective as IM steroids:


We know that the IV formulation can be safely given by mouth:


So, giving a single dose of IV dexamethasone by mouth is not only a superior treatment for pediatric asthma, but readily available as our centers; we can give it by mouth rather than IM, which again should increase patient satisfaction.

Also, giving it here makes sense, compared to giving a prescription. We know from lab studies that steroids cause:

- inhibition of histamine release within 1 hour
- redistribution of WBCs in 4 hours
- increase in number of beta-adrenergic receptors in 4 hours
- therefore potentiaion of beta agonists.

We also know that you can see a clinical effect in 4 hours or less:

Tal, A., et al. (1990). "Methylprednisolone therapy for acute asthma in

This means that giving the dexamethasone in the clinic is also good medicine, compared to giving a prescription, as it will make the patient better sooner.

I also give dexamethasone PO for adult asthma exacerbations, as I believe these pediatric studies can be generalized to adults. The Keeney study has changed my practice for the better; hope you find it persuasive as well. Dosage is 0.6 mg/kg, maxing out at either 10 mg or 16 mg depending on who you believe. It really doesn't taste much like anything, except for a very slight bitter aftertaste; I know, about 2 weeks ago I had an asthma exacerbation and took some without any additive. But it's traditional to give in in a little Gatorade or juice. John Gavin, one of the nurses at Ross, named this a "Decatini" and suggested we get some of those little paper umbrellas to put in it.

Note that in DocuTap one of the options for ordering dexamethasone is "oral" and I have been told this is to be used when ordering the IV for PO.

Hope you find this interesting. Thank you.

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