TRANSCRIPT

S1.E8: ECZEMA (Part 2)

Dr Tom Kovi: Hello and welcome back to *Spot Diagnosis.* This is the second part of our atopic dermatitis episode.

I have with me my co-host, Associate Professor Alvin Chong and today we're joined by Associate Professor John Su, an expert in eczema. In this part, we'll be talking about how eczema is treated. What are the general principles in managing eczema?

Associate Professor John Su: Eczema can be very complex. I think the first point to make is that treatment should be personalised, and it should be clear and well communicated. There are a few aspects to eczema that we want to make sure we don't miss. First, if there is infection, secondary infection, that must be addressed.

Second is treating the inflammation adequately, and that's often the most difficult part to communicate. Third is treating the background dryness and the appropriate use of moisturisation and avoidance of irritants.

Fourth is the controlling of itching behavior and, again, secondary irritants on the skin that might be perpetuating things, be that saliva or sand pits. Then fifth, we may have comorbidities such as secondary immunological triggers that need to be addressed.

Often we need to address a number of these factors and they have to be prioritised. Many families are already struggling to cope with their daily life and then, to give them very complex regimes, are simply undoable. Identifying what can be done, what needs to be done promptly and then communicating it in a way that can be understood is very important.

Associate Professor Alvin Chong: Excellent, that's a very good approach. I'm going to just bring up a case, John. There's a four-year-old boy who's brought into your rooms, constantly itchy, not sleeping that well. The parents are at their wit's end and they're only comfortable in using a regular emollient, but extremely worried about any topical steroid use. Is this something that you see often?

John: Sadly, it is. The fear of treatment is often at the forefront of the minds of families and the failure to appreciate the consequences of untreated disease. As we all know, untreated eczema can have a lot of effects not just in terms of sleeplessness and irritability of children, but also in chronic complications, localised infection which can be very disabling, and many of the other complications that we've already discussed.

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Steroid phobia is a worldwide phenomenon, and it's not limited to any ethnic group or culture or geographic situation. The myths out there and the mixture of messages are very complex. We have to be aware that medical practitioners are only one voice among many and to be sensitive to the discussion and what's happening to the patients, I think it's very important because just to blindly dismiss their fear, I find this usually not helpful, but to contextualise their concerns and to put it back into perspective, I think it's the main thing.

Tom: Do you have an example of how you might try to contextualise that?

John: I see children with infected eczema pretty much on a daily basis. Not getting into fear technique, but I think making it clear that infection can be a very serious condition and it can cause systemic infection.

I often discuss it in the context of an analogy and I use the analogy of putting out the fire in the skin and the Australian landscape which is prone to bush fires in summertime, and that the dryness will, if it's not addressed, will have consequences.

If you're putting out a fire, it depends on the size of the fire. If it's a big fire, we sometimes have to drop water bombs or use fire extinguishers. Sure, when the fire is out we don't keep squirting and squirting until we flood the whole land, but we do have to put the fire out otherwise the tendency for reinfection and reflaring of eczema is very great and it will just lead to the whole vicious cycle going on and on again and often can lead to the need for more sinister treatments which we would do best to avoid.

Alvin: Apart from encouraging topical steroid use, how do you actually manage a child with mild flexural eczema?

John: Again looking at the various components involved, I usually start by going through the daily routine, and the ritual often involves bath and meals. Education about bath temperature, not too hot, not too long. Often we use around 30 to 32 degrees rather than 37, 38 degrees.

Not using soaps or detergents and even with soap-free washers, not being excessive with its use. Remembering to moisturise after water exposure. Addressing climate factors and irritants as they arise and that may be for example, looking at their lifestyle factors whether it's playing in sand pits or wearing synthetic fabrics that are prickly. Those things need to be addressed.

I think often it does require taking history from various caregivers, and then going through the general principles of treatment which includes prevention by treating dry skin adequately with moisturisers, particularly after the bath two or three times a days, so it gets fairly routine.

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Addressing ongoing irritants and this has to be very personalised. Children with flexural eczema may have particular things that are irritating certain things. In the flexures, it may be due to moisture and clothing. In other parts for example, saliva irritations, sand and so on, can need address as well, then the appropriate use of anti-inflammatories, and there are limited number of options.

Generally, I explained that there are steroids and there are non-steroid treatments, and used appropriately, they are both safe. The steroids, I tend to divide into face strength and body strength, and not to confuse the two because the face & genital skin is more sensitive, and then there are the non-steroids, which we have the calcineurin inhibitors and we also have the phosphodiesterase inhibitors coming out and they are good options.

The principle is to first treat and clear the eczema and then, second, is to try to prevent flares. Preventing flares may require, sometimes in hot spot areas like the flexures, a little bit of intermittent treatment may be just once or twice a week for a little bit longer, maybe for another two to three weeks after clearance to ensure that it doesn't recur.

Alvin: How much steroid would you apply and how frequently?

John: This is a very important point. There is a scale called the fingertip unit, it's easily accessible online, and that explains roughly how much topical steroid people expect to use. I think as a guideline, that is a good thing to do because there is a lot of confusion and when we say thin or thick, it really means nothing.

Generally, pharmacists do tend to follow the inserts of boxes and say it has to be applied sparingly. That's often misunderstood, and eczema is very, very often under treated. I think actually either using the fingertip unit or oneself or with one's practice nurse demonstrating the application of creams is very useful.

Alvin: That's kind of general using a topical steroid in mild cases but also in moderate cases. How does your approach change if someone has moderately severe eczema?

John: Moderate and severe eczema can be categorised in various ways. It may be eczema which hasn't totally readily responded to standard therapy. For example, you're using a good going amount and potency of treatment and after two or three weeks, you're not really getting much clearance.

It may be categorised according to extent and severity of clinical signs. For example, using EASI score and SCORAD which are severity indicators. It may be just the frequency of flares or the shortness of time between flares.

I think these have to be managed in slightly different ways but first, if eczema is not adequately treated then we have to, as it were, ramp up the treatment. Either the

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inflammation, the dryness, the infection or whatever is not adequately addressed in which case it must be addressed, or there are confounding factors such as food allergies or aeroallergens which are not being addressed in lifestyle, that should also be addressed, or there are severe compliance issues.

This is a very common problem and unfortunately, parents and patients often give answers that we want. Listening to them well, sensitively and non-judgmentally, I think is very important.

Often we do find if you quiz them in various ways, that what you thought they were using, they're not really using. If that happens, then I think it's good to just lay it out clearly, what is achievable and what should we be aiming for.

I think addressing all these factors adequately is important. If topical therapy is not working as it were, and you've addressed all the other side issues and reasons for failure of treatment, then we do consider escalation. That may involve the use of phototherapy in older children and adults, and sometimes systemic therapies.

Alvin: Can you take us through the treatment ladder for systemic therapies?

John: Systemic therapies: we have to be aware of the health of the child and contraindications. Of oral therapies, there are a number of which have been used and they include mycophenolate, methotrexate, azathioprine, cyclosporine. Different specialists have different preferences but they all have different side effect profiles, and safety and efficacy.

One problem is that we do not have many head-to-head trials of these agents. In fact, they're extremely few. There is one comparing azathioprine and methotrexate in adults but there's hardly any others that really exist.

Once, I can discuss my personal feelings but I'm sure they will be different to other dermatologists and pediatric dermatologists. Perhaps mycophenolate is a little bit gentler but sometimes it doesn't work. Methotrexate, some people favor but, again, it can have its toxicity. Azathioprine, we know it can have significant risks especially used longer term, whether it's in terms of skin cancer or other cancer risks as well as that rare black box issue of hepatosplenic lymphoma. Cyclosporine, again, it can have a number of serious side effects.

There are new treatments out as well, including dupilumab and the era of biologics dawning on us. That is available in some countries. More recently, there are the so-called JAK inhibitors.

Tom: Thank you. Can you tell us what are some of the hot tips in managing eczema?

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John: The first is really clarity and good communication. So, understanding families and I've made the mistake many times of giving very proudly written regimes. I do tend to write my regimes to families which have four children, one parent at home, the other one who works 24 hours a day and it's just totally stupid as in it's undoable.

Invariably, they come back. Mother looks more exhausted than the last time and the eczema is not improved. I think understanding the families and having a little bit of time to listen is important and then, tailoring the treatments accordingly. That would be the first one, is clarity.

Second is adequacy. One of the biggest problems is inadequate treatment and that range is caused by a number of reasons from fear. We've talked about steroid phobia to fads. For example, there's a US dermatologist, amongst others who are advocating this kind of having to withdraw from steroid addiction, letting the eczema come out so that it can clear. That has had quite devastating effects on many children and families because it's generally inappropriate. Two misunderstanding and sometimes, even to, for example, socio-economic reasons of not being able to afford.

I think understanding the reasons for inadequate treatment and addressing them. For example, talking about fingertip units, about alternative ways that we can prescribe. For example, if they have got a health care card or a pension card in the Australian system, we can do formulations compounded which can work out a lot cheaper but also user friendliness of treatments because, to be honest, a lot of topicals are tacky and unpleasant to use. Being able to find one that suits the person is really important.

The third is recognizing that there are many things often going on at once, and whereas we try to keep regimes simple, we still have to be complete.

I had a tertiary-educated friend who had infected eczema. I had written instructions about the use of antibiotics, topical steroids and using a moisturiser for dry skin and so on. Using appropriate wet dressings for a short period when he was having difficulty controlling scratching.

The treatment didn't work. That was because of misunderstanding where he first treated with antibiotics, it largely cleared the infection. The eczema was on fire because it had no treatment. Then he used the topical steroids by which time the infection had recurred. I think recognizing that it is often needed, not just safe but often needed to use concurrent treatment plus keeping it as simple as possible.

Tom: Can you tell us about bleach baths?

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John: Bleach baths have been in fashion for about the last decade and that's using diluted bleach. We know that bleach product contains sodium hypochlorite which is also released by our neutrophils.

As it were without endorsing any particular product but White King is a common bleach that we use. There are other brands. Our neutrophils are releasing little packets of White King to help keep us as bacteria-free, but the way it works is not totally clear. We do know that when you're using it in infected and colonised eczema, it can both reduce eczema severity as well as infection.

It's probably not just simply acting as an antibiotic substitute and definitely isn't. If we still have severely or clinically infected eczema, there is definitely still an important role for antibiotics.

I tend to use it more for children who are more prone to recurrent infection as an adjunct treatment. The dilution is generally 1.2 mls of White King bleach in a litre of water so it's about 1 in 1000 dilution using the bath. Then you often bathe for 5 to 10 minutes. It can help to reduce the severity and also improve the control.

The use of bleach baths in clinically non-infected eczema is much more controversial. I don't think we understand the microbiome enough to really have any clear policies on that.

Alvin: Now, what are some of the pitfalls you've had in managing eczema?

John: The most common pitfall I've alluded to is the issue of miscommunication and misunderstanding or family's abilities to treat eczema.

Another pitfall is the use of over-complex regimes or writing out regimes in a way that is in a language that is ambiguous.

The third is not catering for fears and concerns of parents and families. They may be very specific. I think really having an idea of why, for example, they may not have followed that instruction or they stop treatments prematurely. Sometimes, they may be valid reasons, other times, they may not be.

Fourth is sometimes underestimating the impact of eczema. Often, as mentioned, the eczema can have a very insidious and subtle effect on psychological as well as social and biological health. Undertreating in that circumstance, I think can be a huge mistake or coaxing a teenager to talk about their concerns I think is difficult. Often, we need to make space for them to speak.

Tom: You've mentioned a little bit about the era of biologics for eczema. Can you tell us a little bit more about new development in eczema treatment?

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John: Dupixent or dupilumab is the first biologics that we have available for eczema. It blocks the Interleukin-4/IL-13 communication pathway that is important in the cascade that leads to inflammation in eczema. It is given subcutaneously every two weeks.

It does seem to have a benefit in controlling difficult eczema in a way that is not matched by traditional therapies. It's not to say that it clears eczema in everybody but certainly we have people who have not responded to any other conventional therapies who do respond well.

It does appear to be relatively safe and often doesn't require a lot in terms of blood test monitoring compared with conventional oral therapies. It is expensive unless it is subsidised by the government. At this stage, it is not yet available in Australia on PBS.

Tom: That's the end of our episode on atopic dermatitis. Thank you very much, Professor Su for joining us. We would like to acknowledge our production team, Madi Chwasta for podcast editing. Peter Monaghan and Joanne Coughlin for podcast support.

Thank you for listening to another episode of *Spot Diagnosis.* We hope it's been educational for you and stay tuned for our next episode.

Alvin: We hope you have enjoyed this podcast. Remember, these podcasts are not meant to replace medical advice. If you have a skin condition that requires attention, we strongly encourage you to see your medical practitioner.

Tom: For those who would like to access some further information of this subject, we have placed a transcript, together with some further education and information resources for you on our website. I also want to do a shout out for the GP education events that we run at the Skin Health Institute. Just go to spotdiagnosis.org.au.

Alvin: Please share spot diagnosis with your friends and colleagues. Rate and review us. Let us know what you think. We would really appreciate your feedback and any suggestions. Thank you for listening.

More information, and other dermatology education resources, can be found on our website at

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