TRANSCRIPT

S2.E5 – Rosacea

Dr Blake Mumford: Welcome to Season Two of *the Spot Diagnosis*, a podcast about all things dermatological, brought to you by the Skin Health Institute in Melbourne, Australia. I am Dr Blake Mumford, Education and Research Fellow at the Institute.

A/Prof Alvin Chong: I'm Associate Professor Alvin Chong, Director of Education, and Specialist Dermatologist. Blake and I are your co-hosts. Today's episode is on rosacea. We're recording this via telephone interview due to the current coronavirus pandemic. Our guest today is Dr Belinda Welsh. You might remember her from the amazing podcast on acne from the last season. Belinda is a Specialist Dermatologist and Director of Complete Skin Specialists in Sunbury, in Victoria. She's a Dermatologist with 20 years' experience treating rosacea patients with medical and laser treatments, who also claims special knowledge as she has experienced rosacea firsthand.

Dr Blake Mumford: Belinda, it's our tradition for Season Two to ask our guest speaker to share a fun obscure dermatological fact with our listeners. Does anything come to mind?

Dr Belinda Welsh: Yes, Blake, well I'd like to declare that rosacea has been around with us for a long time. In fact, it was depicted in art as early as the 15th century by a famous Italian renaissance artist, Domenico Ghirlandaio. He did a painting with an old man, it's actually titled "*An Old Man and his Grandson*", and the man is sitting down, lovingly looking at his grandson, and he's got quite florid phymatous rosacea on his nose. So, we know that rosacea has been with us for a long time and even the artists were able to diagnose this way back then.

Dr Blake Mumford: Wow, that is quite interesting. We'll be sure to include a link in the podcast description so you can see this beautiful painting for yourself. Descriptions of rosacea appear frequently in nonmedical literature and art from as early as 1387. Shakespeare's character Bardolph appears in several of his plays and his floridly red and enlarged nose is the subject of repeated ridicule and insult. Poor Bardolph is eventually executed for looting a church. What a tough life.

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An association with alcohol was definitely overemphasised in historical works and medical texts were no exception. 18th-century surgeon turned Dermatologist, Daniel Turner, cautioned his contemporaries that not all rosacea was due to guzzling wine: "It is certain that it does not always owe its origin to hard drinking." We now know that alcohol is not the root cause of rosacea, but this widespread prejudice, unfortunately persists.

As with other dermatological conditions, patients with rosacea bear their disease for the world to see, and with so much stigma attached to it, one need not wonder why patients with rosacea seek a cure. That's enough of an introduction for now, let's hear from our expert.

A/Prof Alvin Chong: Belinda, how common is rosacea? Is it something you see a lot of?

Dr Belinda Welsh: Well, Alvin, in my experience, rosacea is very common. It's particularly common in people with lighter skin types, and some studies have shown that up to 10% of Caucasian people can have rosacea. It's less commonly seen in people of Asian heritage or darker skin types, but they still get it nonetheless. We see it a lot in women, certainly more women than men. We usually see it in people after the age of 30, but because of my interest and perhaps because I had it myself, I really understand what it's like to have it. I see a lot of patients I treat patients every day with rosacea and I actually find it very satisfying.

Dr Blake Mumford: That's good to hear. Belinda, I often find that patients derive some kind of comfort when they know a celebrity has the same disease as them. Are there any famous people who have had rosacea?

Dr Belinda Welsh: Yes, there's quite a few. Often, again, people with Celtic backgrounds and we can see that they've had rosacea because you notice that redness in their face. Bill Clinton, Princess Diana, Cameron Diaz, Renee Zellweger, all apparently have had rosacea, although I can't claim to know specifics. Leo McKern, who's an actor and WC Fields famously had the phymatous sub-type of rosacea with that large bulbous nose, unfortunately. Even Andy Warhol was said to have rosacea. He apparently had quite sensitive skin. He didn't like sunlight and so, therefore, chose his path in life to be all about painting and art, so the story goes.

A/Prof Alvin Chong: Let's go into a bit more detail about what rosacea looks like, Belinda, how do these patients present to your clinic?

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Dr Belinda Welsh: The most common presentation is with facial redness generally over the nose, cheeks, and chin, with or without papules and pustules. We know that at the moment, the most common subtypes of rosacea are erythematotelangiectatic, redness, and capillaries. The second is papulopustular, which may combine with the redness and capillaries, or be separate. The third type is ocular rosacea, and the fourth type is phymatous rosacea, where you get this overgrowth or hypertrophy of tissue, often on the nose. The most common subtype, I think, is the erythematotelangiectatic with papules and pustules. It looks a little bit like acne, but it's mostly localised over the nose and cheeks.

A lot of people will flush with their rosacea and that can come and go, but most people will find that it's extremely frustrating, they're embarrassed and it has a significant effect on their mood and quality of life.

Dr Blake Mumford: Let's launch into our first **skin tip** of the episode. Rosacea subtypes include, erythematotelangiectatic- yes, that is a mouthful- papulopustular rosacea and phymatous rosacea.

Dr Blake Mumford: You mentioned papules and pustules occurring in the papulopustular subtype, do these result in scarring like acne can?

Dr Belinda Welsh: No, and that's important because even though rosacea can be very inflammatory and have quite angry looking lesions, surprisingly, they don't scar like acne can. We don't really understand why that is the case. There's obviously different inflammatory mechanisms, but reassuringly for rosacea patients, they don't scar.

Dr Blake Mumford: Is phymatous rosacea considered to be like the end stage of rosacea?

Dr Belinda Welsh: Not necessarily. Phymatous rosacea can be a subtype in and of itself. That means it can develop without necessarily having those other features that we discussed. Conversely, people who have erythematotelangiectatic or redness and flushing, or the papules and pustules, don't necessarily evolve to phymatous rosacea. Again, it seems to be a unique condition, which we don't really understand why some people are more prone to that than others.

Dr Blake Mumford: Let's have another **skin tip** right now. It's important to note that some of the subtypes of rosacea can in fact overlap.

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A/Prof Alvin Chong: Can rosacea occur anywhere else apart from the skin?

Dr Belinda Welsh: Yes. This is really important to know. I mentioned earlier that there is a subtype called ocular rosacea. Again, this is quite curious in that there can be inflammation in the eyes, which can be independent of the severity of rosacea on the skin. Occasionally, ophthalmologists will diagnose ocular rosacea without significant skin changes. The symptoms of ocular rosacea are not particularly specific. It's generally burning, stinging, light sensitivity, or that feeling that something's caught in your eye and the signs aren't specific either. The common ones are lid margin telangiectasia, conjunctival injection, or hyperemia, which really means enlarged conjunctival vessels, particularly the palpebral vessels and meibomian gland dysfunction. That really describes or is seen as blepharitis with crusting along those lid margins.

Dr Blake Mumford: Does rosacea ever resolve on its own?

Dr Belinda Welsh: Well, we often think of rosacea as a condition which has genetic underpinnings, which means that you have a genetic predisposition to getting it. We don't consider that we can cure rosacea, but we certainly can treat it very successfully and maintain control. I think we really tend to encourage people to consider that it's a condition that needs to be maintained rather than cured. I think untreated, it will tend not to go away, but once it's treated, it can certainly stay away with good avoidance of triggers.

A/Prof Alvin Chong: Speaking of triggers, my patients often tell me that they get rosacea when they get hot or stressed, in your experience, Belinda, what are some of the more common triggers for rosacea?

Dr Belinda Welsh: Well, they're certainly the top two, Alvin, and alcohol being right up there as well. We don't really understand what it is about alcohol that triggers it, but it's probably the fact that alcohol is a vasodilator and there are problems with rosacea with vascular hyperactivity, and as a result alcohol tends to aggravate that.

Sun exposure is really important too, getting too much sun will tend to make it worse, exercise because you vasodilate, hot drinks, spicy foods, again, probably because of that increased vascular flow into the face, and certain cosmetics because the skin barrier function is disturbed often, and people's skin tends to be very sensitive. Most importantly, here we are in the middle of this pandemic, and we've discovered here in Melbourne now that we're all wearing masks, and certainly all around the world, people who are doing this more regularly, that will generate more heat under those

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masks and we're actually seeing people who are getting a bit of a flare of rosacea because of needing to wear masks all the time.

Dr Blake Mumford: We've mentioned acne as a potential differential diagnosis, are there other diseases which can cause a facial rash similar to rosacea?

Dr Belinda Welsh: Absolutely, and diagnosing rosacea, we often think is fairly straightforward, but in fact, it can require some attention to detail. There are a number of other conditions that look like rosacea, and they can include Seborrheic dermatitis, sun damage with telangiectasia redness, and some dryness over the face, periorificial dermatitis, also known as perioral dermatitis, steroid rosacea, irritant contact dermatitis, and allergic contact dermatitis. I find that often these conditions can coexist in the same patient simply because they've been using a lot of products to try and calm their skin and heal it and tend to cause irritation along the way. I think steroids are very important to ask about because many patients don't realise that although it initially improves it, it can often make it worse.

Dr Blake Mumford: We're going to leap into another skin tip right now. Remember that other inflammatory conditions can look like rosacea, as well as coexist with it.

A/Prof Alvin Chong: I see patients with fair skin, so Anglo-celtic patients apart from rosacea, they are also quite photoaged. Can you tell us, Belinda, are they related? Or is it a continuum? Or are they totally separate?

Dr Belinda Welsh: Well, that's a great question Alvin, and it's actually been debated as to whether we separate them or whether they are a continuum. I think they're probably a continuum because many of the features of photoaging, telangiectasia, that background redness, blend with this erythematotelangiectatic rosacea. So it can be actually quite hard to decide when one starts and the other stops.

Ultimately, for that subgroup, the treatment can be similar. I think actually the important part about that is to consider the fact that many of these patients actually have sun damage as an important factor contributing to what we're seeing. We know that the sun and the changes induced by the sun, which is loss of collagen and telangiectasia, can actually trigger or aggravate rosacea. At some point, we need to consider perhaps that they're on a spectrum.

Dr Blake Mumford: Belinda in that vein, could you perhaps tell us in a bit more detail about the pathogenesis of rosacea?

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Dr Belinda Welsh: Well, Blake, it's actually very complex and what's really interesting is for as long as we have known about rosacea, and as good as all our biology is and our genetics are, we still don't really understand it as well as we'd like. We know there are genetic underpinnings, but they probably lead to an aberrant innate immune response, which causes excess inflammation to external factors that we shouldn't respond so strongly to, and that then leads on to neurogenic inflammation and vascular hyper-reactivity. All these things are incredibly complex and innately combined to lead to what we see. It has been difficult to know because people present in various ways. The pathophysiologic connections really remain to be defined at the moment. After all that, the short answer is we don't really understand the pathogenesis as well as we would like.

Dr Blake Mumford: Right. What about the role of the demodex mite, I understand it's somewhat controversial, do you think it plays a role?

Dr Belinda Welsh: Well, for many years I didn't think it did, and yet with the introduction of a cream we've had available to us more recently, which is 1% Ivermectin, and the actual very good response people have had to this would suggest that it may play a role. To take you back, demodex mites are small mites that live usually harmoniously with us in our hair follicles, and we usually have only a small number per hair follicle, but in patients with rosacea, they have increased number of mites per hair follicles, suggesting that they may play a role, but exactly how they contribute to the signs and symptoms of rosacea are not well understood, although we know that perhaps reducing that number may lead to improvement. Perhaps they do play a role. Exactly how? We don't quite understand.

Dr Blake Mumford: Right. It sounds like the jury might still be out on that one. Are there any tests that are needed to confirm the diagnosis of rosacea?

Dr Belinda Welsh: Mostly not. It's actually a clinical diagnosis, we don't need special blood tests. Generally. We don't biopsy it. There's only certain conditions which might induce flushing, quite rare conditions. If I think people have flushing which is excessive, I might do some blood tests for those. Very rarely would we biopsy to exclude some other unusual dermatological problem if the pattern was unusual. For most people, biopsies or investigations are not necessary.

Dr Blake Mumford: Now that we've talked a little bit about the causes of rosacea and some of the triggers and the tests, let's talk about the treatment of rosacea now. Belinda, what sort of advice do you give patients about things that they can do themselves to minimise their symptoms?

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Dr Belinda Welsh: Well, there's lots of general measures that can help. I think that the first thing is to try as much as possible to avoid the things that we know set it off. Especially where that tends to be alcohol and heat. Avoiding sitting in front of a fire, avoiding getting hot in bed overnight, avoiding sticking your face under a hot shower where the water's running over is really important. Stress is also a significant trigger, I think, for rosacea. Sometimes we can look at treatment or measures that might help with stress reduction, and sometimes that stress comes from external sources that are hard to control, but trying to manage your stress is really helpful.

If you get a flush that's prolonged, and often they're quite uncomfortable for people, sucking on ice can help because that will tend to cool the blood as it's passing into those facial vessels. I encourage people to do this instead of putting ice directly on their skin, which can help constrict the vessels, but that tends to bounce back and flush even more later on. So sucking on ice for a flush.

Skincare is critical, and this is really important. Not only just finding a very simple non-irritating skin care regime, but sticking to it and doing it every day. I recommend gentle products. They don't have to be expensive, but in those, I really usually encourage a cream-based cleanser, a rich moisturiser, and a daily SPF 50 sunscreen. Once you find something that doesn't irritate it, stick to it, avoiding anti-aging "ingredients", alpha hydroxy acids, retinoids, often those products are too irritating for people with rosacea. At all costs, I really encourage people to not use topical steroids. By these, I mean topical cortisone creams because they can initially calm it down, but once they stop using it, it rebounds often even worse. No cortisone creams, either over the counter from the chemist or from well-meaning relatives.

Dr Blake Mumford: **Skin tip**, topical corticosteroids should be avoided in the treatment of rosacea.

A/Prof Alvin Chong: What other treatment options are available for these patients when general measures are not enough?

Dr Belinda Welsh: Treatment options can depend a little bit on the subtype. If we first look at inflammatory rosacea, and that's the type where you get the papules and pustules, it looks a little bit like acne, there's often first-line treatments that we'd consider and they are prescription creams, and then second-line treatments, which are systemic agents or oral medication.

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First-line, we would usually use something like a topical 1% Ivermectin cream, which I mentioned last time, which is thought to perhaps modify those little demodex mites. That can be used every night as part of your skincare regime. Patience is required. Sometimes these creams take quite a few weeks to settle things down, so I really encourage people to persist. Other creams can be used such as metronidazole 0.75% or azelaic acid 15% if the Ivermectin either doesn't work or is not tolerated.

If those don't work, we often move on, or initially if it's bad, I will start concurrently oral antibiotics. Again, we don't really understand why these work, but they seem to have anti-inflammatory properties. I think Doxycycline is usually my first treatment option at 50 to 100 milligrams a day. Then beyond that, if it's not tolerated, it's very uncommon for Doxycycline not to work, other alternatives would include Minocycline, Azithromycin, Erythromycin and there's several others, but usually Doxycycline is effective.

Longer-term, once we've got the inflammation under control, I like sometimes to switch to Isotretinoin because of its effect on the sebaceous glands, reducing sebaceous gland, hyperactivity, and size, and that can work very well to flip into maintenance mode with low doses, which are well tolerated.

A/Prof Alvin Chong: Thank you, Belinda. Those are good options for inflammatory rosacea, how do you actually treat the redness and the flushing aspects of rosacea?

Dr Belinda Welsh: I think here, often redness and flushing can be triggered by barrier dysfunction. That means inflammation of the skin surface, so that skin care is critical. Then beyond that, I think physical modalities are really important and pulsed dye laser is often the standard of care for this type of redness and flushing, including telangiectasia, as well as intense pulse light energy-based devices or broadband light. It helps with the telangiectasia, but it can also help with the flushing. It requires patience, again, often three treatments, at least, sometimes four over time, perhaps spaced about three months apart. Gradually and slowly we can switch off that inflammation and improve the look of the skin and barrier dysfunction. For severe flushing, occasionally you might need to use an oral or systemic agent, this is where beta-blockers are sometimes used, such as Carvedilol or Propranolol or occasionally agents like clonidine.

Dr Blake Mumford: Sounds like it's time for another **skin tip**. The principles in the management of rosacea include: avoiding triggers, controlling skin inflammation with

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topical treatments and systemic agents, remodeling the vascular network, and maintaining remission.

A/Prof Alvin Chong: Can you tell us a bit about cosmetic camouflage for rosacea?

Dr Belinda Welsh: Yes. I think this is really important. Not only just to help calm that skin, but to help patients psychologically. It's very embarrassing, especially when you're older to have to walk outside the door with papules and pustules and it makes you feel like you're a teenager again. Being able to wear makeup is really important. Most people can tolerate most liquid foundations, but having an SPF-50, or at least 30 is useful, so that you get that sun protection as well. That can be useful. There are specialty makeups with undertones of green pigment, and they're really helpful because they counteract the red and they help camouflage better. I do encourage all my patients to find a makeup that they like, and they're welcome to use it because generally, it doesn't tend to aggravate their skin.

Dr Blake Mumford: How do you approach the treatment of phymatous rosacea?

Dr Belinda Welsh: Well, if it's early and we're just seeing the start of it, Isotretinoin is a really excellent option. It's actually very well tolerated, I find in rosacea. We often worry about it being drying but most patients tolerate it very well. Its benefit is that it has an effect on the sebaceous gland function and it reduces sebaceous glands size and activity. That seems to be one of the underlying problems with phymatous rosacea. Isotretinoin, often at low dose, for example, 10 milligrams daily or less can be used. Generally, patients need to have it longer term though, so I give them an expectation that they'll be on it perhaps for 12 or 18 months, at least. Sometimes even longer.

If it's very severe and there's large bulbous areas on the nose and it's quite large and distorted, then it really needs a physical therapy. CO2 laser or carbon dioxide laser is really the gold standard for remodeling reshaping noses. That treatment can actually be life-changing.

Dr Blake Mumford: Getting some of that confidence back so that I can go out that front door again.

Dr Belinda Welsh: Absolutely and again, we spoke about this idea that patients with rosacea are often mislabeled, especially this phymatous type, as drinking too much

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alcohol. They'll often say that they are inappropriately categorised as heavy drinkers when, some might, but many don't. It's important that that stigma is removed.

Dr Blake Mumford: At what point should someone consider referring to a dermatologist for expert advice?

Dr Belinda Welsh: Well, look, I would encourage earlier referral. If someone has mild rosacea and they've responded well to topical treatments and of course of Doxycycline and it settles down, terrific. If you find yourself in the position where people are cycling on antibiotics all the time, and every time they stop their skin flares up, or they're continuously needing them, then I think it's time to refer, because we might add in Isotretinoin. We might add in laser in an attempt to gain better control and longer-term remission, which is generally quite achievable.

Dr Blake Mumford: Finally, can you tell us some myths or commonly held misconceptions that you hear about rosacea?

Dr Belinda Welsh: I think most of the patients I see do get the impression that it's progressive, and if they start off with a little bit of flushing and a little bit of redness, they're going to end up with papules and pustules and then eventually the phymatous type of rosacea. Everybody seems to worry about getting that sort of the bulbous distorted nose. That's not necessarily the case. We know that even though some of these subtypes can overlap, sometimes they don't. I've got quite a large number of people who have erythematotelangiectatic rosacea that never go on to develop other features of it.

I think that's one big myth. The second is that it's not particularly treatable and it's absolutely treatable. After doing it for so many years and having had it myself, I would say that for many years now, I've been able to keep it under excellent control without any problems maintaining that remission. I would like to think that we can achieve that for most of our patients, the vast majority, with some work up the front end and then maintenance in the longer term with strict adherence to sun protection and good skin care, and we can keep their skin in great condition. I'd like to give a plug to optimism there in treating rosacea.

Dr Blake Mumford: Belinda, thank you so much for sharing your insights and your firsthand experience of what rosacea can be like. On that note, we'll wrap up this episode.

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Dr Belinda Welsh: Well, thank you both very much for asking me to be involved and it's been an absolute pleasure. I've really enjoyed speaking about a condition that's very close to my heart.

Dr Blake Mumford: We would also like to thank Jo Coughlin and Peter Monaghan at the Skin Health Institute

A/Prof Alvin Chong: We hope you've enjoyed this episode of *Spot Diagnosis*. 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.

Dr Blake Mumford: For listeners who want more information on this subject, a transcript of this episode, and links to other resources can be found on our website, spotdiagnosis.org.au that's spotdiagnosis.org.au.

A/Prof Alvin Chong: 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. Goodbye.

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

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