TRANSCRIPT

S1.E6 - Acne

Tom Kovi: Hello and welcome to *Spot Diagnosis*, a podcast about all things dermatological, brought to you by the Skin Health Institute in Melbourne, Australia. I am Dr. Tom Kovi.

Alvin Chong: And I am Associate Professor Alvin Chong.

Tom: We're your co-hosts. This episode we'll be talking about acne, a common skin problem that affects almost everyone at some time during their life. Today we're joined by Dr. Belinda Welsh. She has over 20 years of experience as a practicing dermatologist with a special interest in laser therapy and managing acne scar. She's currently a consultant at the Royal Children's Hospital, the Skin Health Institute and in private practice in Sunbury, Victoria. Welcome and thank you for sharing your time with us today, Dr. Welsh.

Dr. Belinda Welsh: Thank you both. It's an absolute pleasure to be here.

Alvin: Now Belinda, can you tell us a little bit about acne. What is acne?

Belinda: Well, most people understand acne to be pimples. That's the common word for it. It's actually a condition that's got a number of causes, a number of factors leading to it. Ultimately though, it's a problem of what we call the pilosebaceous follicle of the skin which is the hair and oil gland unit in the skin. It's extremely common especially in adolescents and young adults and most people know that. Eight out of ten Australians will develop acne during their life with about 5% experiencing severe acne. Many people have experience of acne over their lifetime.

Tom: What causes acne?

Belinda: We would love to be able to narrow it down to one thing, but there's a lot of different contributing factors. Firstly, it tends to be genetics. Like many conditions, genetics plays a part. If you have a strong history of acne in the family, you may be at slightly higher risk. Then the first thing that happens tends to be blockage of that pilosebaceous unit. What that means is that the oil gland sitting under the skin has a little duct that sort of drains first into the hair follicle and then out onto the skin.

Often the dead skin cells on the inside of the hair follicle tend to build up and block that duct so that when you hit puberty the oil gland enlarges, makes more oil, but it can't get out. It's a bit like a stagnant pool if you like. Then that's when the bacteria get in. Nothing is draining out. The bacteria get in and then it becomes a pimple and infected. That's what most people recognise as typical acne. There are complex mechanisms that lead to that happening and there are also hormones involved.

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For a lot of people, they may not have hormonal influence but for some women, particularly, hormones play a big part in their acne and we need to recognise that when we're trying to treat them.

Alvin: Can you tell us what acne looks like?

Belinda: Acne is different in everybody. It's really important to recognise all the different types of acne because a lot of people will not actually call what they have acne. They think they've got a couple of pimples, but in fact we would call it acne. It tends to have at its heart two types of patterns: what we call the non-inflammatory pattern and the inflammatory pattern and often people under recognise, in my experience, the non-inflammatory pattern.

What I mean by that is that they have blocked ducts that don't become infected and don't evolve into a pimple. Most people recognise those as blackheads and whiteheads. Often people can have large numbers of whiteheads in their skin, but they're not really visible until you physically stretch out that skin and you can see them all throughout, scattered all throughout that skin. That's the most important thing to do when you're examining someone with acne is actually get up close, have a really good look and stretch out the skin to look for those whiteheads.

We call them comedones and we call them closed comedones if they are a whitehead or open comedones if they are a blackhead. Then, of course, there's the more easily recognisable inflammatory acne where you've got pimples. They're red bumps. They're often sore. They're maybe pustules where there's pus in them and everybody is just usually desperate to pick at them. Then of course when they are deeper under the skin, they're cysts or nodules. Those ones are the ones to recognise, they are painful, and they can lead to scarring. That type of acne really needs attention early and needs more aggressive management because of the risk of scarring.

Distribution is another thing that can vary. Some people only have it on their face where others can have quite extensive acne involving their chest and back as well, even down onto the shoulders and upper arms for some people. Examination means not just looking at somebody's face, but also asking them about involvement in those other areas.

Tom: Many teenagers are very worried about their acne. How would you counsel them?

Belinda: Well, look, the good news is that most people's acne will resolve over time, but not everybody and we can't necessarily predict whose acne will improve with time. It's generally not something that I reassure people that will happen without treatment. I certainly know a lot of parents have the impression that acne will just get better or it's something that you just have to put out with this during your teenage years, but that's definitely not the case.

I find that the parents who've had experience of acne themselves are way more likely to bring their kids in early for treatment. Some people's acne will persist. About 1% of men will have acne in their 40s, 5% of women will. We know that it's something that can be persistent and can last a lifetime although that is the minority.

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Women can sometimes also develop it for the first time or redevelop acne in their 20s and early 30s. We don't always understand why that is.

Even neonates and small children can develop acne rarely. It's got a very broad range of ages that it affects, but luckily, it's mostly adolescents and often will improve. The very, very important thing is and the message that I'd like to get across is that scarring is what needs to be looked for carefully. If there's evidence of scarring, then whether it gets better by itself or not it needs to be treated because a scar will be there for life.

Alvin: Apart from scarring, which is an issue, what other kinds of problems can acne cause?

Belinda: I think the most common problem is psychological, Alvin. It's tough being a teenager especially now. I didn't grow up with Instagram and all those other challenges. You're extremely self-conscious. There's a lot of psychological distress and we know from studies that kids with acne have anxiety, depression. They won't go out. I think you can pick those things very easily for girls who come in that are caked in makeup. They won't leave the house without it.

Often, I think it's misunderstood or underestimated what type of impact this has on young people growing up. Especially young people now have got the perfect Instagram images everywhere which they don't know always realise are Photoshopped and fiddled with before they're put out there. So that's something that we really need to be aware of.

Boys is something else. I think a lot of the time boys will sit there and say, "No, I'm okay. You know, mum brought me along but I'm really okay. It doesn't bother me."

But, I'll say, "Well, if I could give you the option of clearing your acne, would you like that?" "Oh, actually I would." I think boys sometimes are easy to underestimate because they're more likely to tell you it doesn't bother them when it does.

Other problems that we know are that it can actually be a manifestation of someone's steroid use. If they've been in the gym and they've been working really hard, the acne can actually be a sign that they've been using substances to try and help build muscles. Always worth being aware of that to just explore those things.

Tom: What are some of the general factors in managing acne?

Belinda: I usually like to acknowledge at the start that I understand how much impact this can have on people's psyche and try and be really positive about our chance of success. We can treat acne really successfully now. We've got the tools to do it. So,I like to convey that sense of optimism to the patients. Diet is actually interesting. We know now that there's evidence that a low glycemic diet does help acne. It's not going to cure it. It's won't that we don't want people to have this expectation if they fix their diet, they're going to magically have their skin cleared, but it does have an impact.

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A lot of people do not have a good diet. They don't exercise enough. Everyone's in on their phones and perhaps not as active as they should be. I do encourage people to try for that low GI diet which is effectively eating foods that increase your sugar level slowly rather than quickly. Sometimes it's just a matter of cutting out fizzy drinks and reducing takeaway food.

Skin care is critical, and I think any attempt to fix acne requires close attention to what people are doing. Skin is very accessible, and it never ceases to amaze me all the weird and wonderful things people have put on their skin which often can cause irritation, dryness, inflammation before we've even started. Toothpaste, you name it, people will try it.

I try and make sure that we've got a cleanser that is not a soap-based and is irritant-free and fragrance-free. That they've got a moisturiser that's appropriate. Not everyone has got oily skin with acne. Some people have dry, so we need to tailor that skin care to them, and they're using a sunscreen. That's also really important, so I address their skin care.

Then depending on the type of acne they have, we might choose topical products, we might choose oral, which could be antibiotics, anti-androgens for women or isotretinoin. For some people who may not want any of those things, we might tailor a series of peels or some red light. There's a lot of different tools in the toolbox for treating acne and there's a lot of tailoring treatment to the individual.

The other really important thing is I get up close, I have a look, I'll stretch that skin and if they've got a lot of these comedones, closed comedones, white ones, they have to come out. They will not come out by themselves, you need to actually physically get them out, so extractions are really important for that group.

Alvin: Just to clarify, removing comedones is done by professionals. The problem is a lot of people tend to try to pick their own pimples and that can just lead to worse scarring. Whatever happens, don't pick your own pimples.

Belinda: Great advice, Alvin.

Alvin: Now Belinda, can you tell me how you treat mild acne?

Belinda: Sure. Well, a lot of people already come having tried things like azelaic acid or finacea which is available over the counter, as well as benzoyl peroxide products which include Benzac or Proactiv, which is also very popular. If they've come to me, they may be using those incorrectly or just causing a bit of dryness or their acne is just not responding.

Generally, we then move to a prescription product which might be a standalone product which contains a topical retinoid or combination product. Combination products I think are worthwhile starting with and that would include Epiduo which is on the PBS and widely available and actually very effective. We've got some new products such as combination clindamycin 1%, tretinoin 0.025% or Acnatac, which also combines that topical antibiotic and a retinoid.

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The most important thing about incorporating these usually is to make sure people get their skin care right. Acne topicals generally are quite drying and if people have dry or even oily skin, it tends to be easily irritated. We don't want to pile on too many drying products. If you're using an acne-based wash and some of these prescription topicals, sometimes you can end up drying out very quickly. I'll tend to move people to a gentler cleanser and moisturiser while they're using these and start them perhaps every second or third day and gradually build up their skin's tolerance. The type of product I might use would be Cetaphil cleanser and moisturiser and then get them to put their nighttime product on all over their face, not just on the pimples. I think that's often a misunderstanding of the patients, that they just dot the pimples. We're trying to treat the lesions, but also prevent new ones coming up. Apply it all over, a small amount and then just dab a little bit of moisturiser over the top just to prevent too much dryness. If their skin gets too dry, back off, go back to every second or third day. Often people's tolerance will improve over time. There's always a small number who just won't tolerate it but if it's used correctly, then some really good results can happen.

Tom: Now moving on to treating moderate acne. How would you define that`?

Belinda: Well, moderate acne might be a relatively limited number of pimples over the nose, cheeks, chin. Over the face and possibly chest and back as well, with a combination of blackheads and maybe some limited whiteheads. Personally, I find the most challenging acne to treat is the people who've got that very extensive non-inflammatory acne. The blackheads, the whiteheads, because ultimately antibiotics will not fix that. If people have in their head antibiotics are good for inflammation, the infected ones, but not good for that blocked pores. People talk about congestion with acne. Their skin is congested. Those ones really ultimately, even the milder ones need isotretinoin.

For the more inflammatory acne, it's great to start with perhaps a topical and a course of oral antibiotics. Generally, we prefer the tetracyclines, namely doxycycline or minocycline. 50 to 100 milligrams a day. Three months is a good trial for duration and I also make sure that people understand it's not going to get better overnight. They need to be patient, it's going to take at least four to six weeks to see an improvement and to hang in there. Once we get to three months nowadays, we don't like keeping people on antibiotics long term, so I would generally stop at that point and see how they go. If their acne recurs quite quickly, they may well be a candidate for isotretinoin.

Alvin: When would you use an anti-androgen such as an anti-androgenic like contraceptive pill or anti-androgen by itself?

Belinda: Acne in women can be quite challenging and then often a trial of contraceptive pill is worthwhile. Plus or minus spironolactone or cyproterone acetate as an additional anti-androgen. If I find it difficult to pick who is going to respond to those and women who maybe don't want isotretinoin, it can be really valuable, and some women respond very well. It's not necessary to do routine endocrine testing in acne. However, if women present with signs of androgen excess, and

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that might include terminal hair growth on their face, if they've got some central adiposity, if they have some androgenic alopecia, then that certainly warrants further investigation. In that situation, I think that hormonal approach is worthwhile.

Alvin: Tell us how you treat severe acne.

Belinda: Generally, it's isotretinoin. This medication has been around for 40 years now. It was the game changer when it was introduced and it is still not been improved upon. Really, it's the medicine that we go to and we can rely on. It's so important. That type of acne, usually I will treat aggressively. Isotretinoin, if it's very inflammatory and people have got a lot of comedones, it can actually flare up a little bit when they start treatment. I will always start them on low dose prednisolone to prevent that flare and sometimes even add in an oral antibiotic. Now, in that situation I'll choose something like Keflex because I don't want to combine doxycycline with isotretinoin. Isotretinoin is fantastic and it has such minimal drug interactions. The one thing it will interact with is doxycycline and benign intracranial hypertension is theoretically the problem that you could encounter there.

Treat it quickly, treat it aggressively. Make people understand that this is actually going to take a while. They could be on that medication for 9 to 12 months and we're going until every last blackhead has gone. Their skin is perfect. Their acne is under excellent control and then I'll wean it to make sure that it stays that way. I mean 60% to 70% of people who have a course of isotretinoin are effectively cured of their acne. I think it's really important to make sure that if you're in general practice that you recognise those patients and they're referred early and even if you're told that there is perhaps a wait to see the dermatologist, just indicating on that referral and faxing it through that this is really severe acne is really important and I think all of us would prioritise that kind of patient.

There's a lot of misunderstanding about this medication. What it actually is, it's an oral retinoid, so it's a synthetically modified vitamin A and it works by reducing sebum secretion as its core function. It reduces those oil glands. If all of a sudden, you've gone from this oily skin, you're reducing less oil, it actually clears up that hyperkeratosis on the duct, which leads out to the surface of the skin. Whatever oil you're producing is draining so you don't get that blocked stagnant pond that bacteria can get into. That's how it works at its core. That's why it does lead to such a long-term cure because some people can have that reduction in their oil gland for up to six months post-treatment.

Everything else that follows from that blockage then resolves. It's actually usually extremely well-tolerated. I know there's a lot of people who have all sorts of fears and misunderstandings about this medication, but I think in the media it has developed this negative connotation, which is very unfair and undeserving.

Alvin: I have a friend who remembered what treating acne was like before isotretinoin and he said it was like praying.

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Belinda: [laughs]

Alvin: In terms of side effects, you're right, the media does play up on the negative aspects of it, particularly the link between isotretinoin and mood disorders. The reality is that most patients on isotretinoin will just get fairly mild nuisance side effects relating to dryness, dryness of their lips, the skin, the eyes. Sometimes they get nose bleeds. They become very photosensitive. It's not a fun drug to take during summer, but compared to having very severe scarring acne, it's not too bad. What is your experience with isotretinoin particularly the more significant side effects? What are your concerns?

Belinda: Firstly, I think what it's really important to know is that those side effects are dose dependent. I find that people are struggling a little bit, we just modify the dose down and they cope. The more severe side effects generally are mood if anything. That is extremely rare in my experience. It's the one thing parents seem to worry about the most. I think doctors worry about it, but what we often fail to recognise is that mood disturbance can actually be a result of the acne. I've seen many kids who have literally refused to leave home. They won't go out; their social life shrinks down because they're so embarrassed. That in itself is their problem.

The remarkable transformation in some of them once their acne is cleared is incredible. That's the thing I love the most about treating this condition. If there are any mood concerns, then, of course, we can manage people in conjunction with a psychologist, a psychiatrist, often their GP who can keep an eye on them. I think we're very mindful and we're very careful about that. I always talk to all my patients about that. Probably the thing that I am mindful most of is it's a teratogen and the bigger conversation is usually with all the women and the importance of contraception whilst they're on this medication and for up to three months after they finish because it is a category X drug and as a result has a high risk of causing birth defects. That is probably the thing that keeps me awake at night more than the mood issue, which is much rarer.

Tom: When do you think should patients be referred to a dermatologist?

Belinda: Well, I think there's a few situations where we would think early referral is worthwhile. The first would be that pattern of acne that I mentioned before. Extensive blackheads, extensive comedones. Then really the only thing that will fix that is isotretinoin. You need to get in, it takes a long time to fix that acne. We need, I've got my specialist cosmetic nurses need to do multiple sessions of extractions and it's hard going so the earlier we get onto that the better. That would be the first thing.

The second is obviously if it's very severe. If there's nodules, cysts, if there's any evidence, even mild of scarring developing, I think we need to get onto it early and I'd recommend referral.

The third situation is gauging the emotional response to it because sometimes some people can have quite mild acne or what we would consider mild, but the impact that has on their quality of life is really significant. If you're seeing someone who's clearly picking their skin or they're covered in makeup, they're very quiet and you can see that they're withdrawn. I think those ones

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often we will treat more aggressively, even though their acne is mild, understanding the impact, it is having on their psychology.

Alvin: Tell us how to treat acne scarring.

Belinda: We actually have a lot of tools in the toolbox I said before with acne scarring. I actually have a special interest in this and there is combination of treatments. Firstly, it's something that takes time, takes persistence and a bit of dedication on the part of the patients, but we can actually get quite nice results. What we will use as a combination of treatments.

Acne scarring is variable. Sometimes there's scars that are icepick scars that are so-called, there are boxcar scars. They look and feel different. We will use things like hyaluronic acid fillers to increase volume where volume has been lost and there's atrophy.

We will use things like subcision, so break down that scarring underneath the skin to allow the skin to lift up. We use certain types of chemical peels. There's a technique called TCA CROSS, which is TCA is trichloroacetic acid and chemical reconstruction of skin scars. We pull out some lasers. Redness is something very easy to fix with vascular lasers and of course the fractional and non-fractional CO2 lasers and lasers within that realm can really modify difficult scarring. It is treatable and I think it's worth people knowing that and perhaps referring if people are bothered by it and usually, they are.

Alvin: Treatment of scarring is quite protracted and can be quite expensive. It's always better to prevent significant scarring as the main aim of acne treatment. If it does occur there are ways that we can treat it. We can move on to some myths in acne. This is always a little bit interesting and fun. Can you tell us about some of the myths that you've come across in acne?

Belinda: [laughs] Oh, they abound, Alvin, don't they? Okay. Well, I think, first of all, this idea that if you've got acne, you're somehow not washing your face properly and you're not clean and there's a little bit of blame placed on the patient. That, of course, leads to people over washing and trying to scrub out their blackheads, which of course you can't do. I think the number one myth is my skin's dirty. I'm not cleaning enough.

Number two is it's diet and again, I think that is unfair for the patient because you know, sometimes parents or others might well-meaningly say, "Well, it's all your diet and if you only fix that, you'll be better." Which is not the case necessarily although it's good to improve it.

There's interesting ones like too much sex, not enough sex, masturbation. There are the old favorites. [chuckles] The other thing is that it's a rite of passage and it's not necessarily a rite of passage. Don't actually have to put up with your acne during your teenage years anymore, we can treat it. It's not necessary. I don't think it's building your personal resilience to have to put up with your acne.

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Tom: Now, just coming to the end of our episode, do you have any suggestions in terms of patient information resource about acne?

Belinda: Well, I think that there's some fantastic websites out there and one of my favorites is the *All About Acne* website, which has been done by our College. That has an enormous amount of information, great resources for parents, great information for kids. It talks about all these myths about acne and treatments, and it outlines them all very carefully, including what's available for acne scarring. I'd definitely recommend that. It's acne.org.au.

Alvin: The other useful resource, particularly directed at schools is it's called Project Acne and it's actually available on the website of the Skin Health Institute. It's designed for secondary school students.

Tom: Now that's the end of our episode on acne. Thank you very much, Dr. Belinda Welsh, for joining us. We'd like to acknowledge our production team, Joanne Coughlin for podcast editing and Peter Monaghan for podcast support. Thank you for listening to another episode of *Spot Diagnosis*. We hope it's been educational for you, 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 www.skinhealthinstitute.org.au/podcasts

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