

Dermatologic Manifestations in Children with Skin of Color - Pediatric Grand Rounds-1-16-2026-Meeting Recording

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1h 0m 10s

● **Kamat, Deepak M** started transcription



Kamat, Deepak M 0:07

Yeah, we test out.

See something on the top of your slide? Is that me or?



Gupta, Deepti 0:29

Oh, that might be.



Kamat, Deepak M 0:35

Yeah, now it's it disappeared.



Gupta, Deepti 0:38

OK.

And you see just the full, um, presentation, right? Thanks. OK.



Kamat, Deepak M 0:42

Yeah, yeah, I see your full slide now, yeah.

Are you really?



Gupta, Deepti 0:47

Mhm.



Kamat, Deepak M 0:49

Good morning. It's 7:30. Happy New Year to everybody. This is our first grand round for the year 2026. The CME code is in the chat box. We'll keep repeating it frequently. It my It's my great pleasure to introduce this morning's grand round speaker, Doctor Deepti Gupta, who is an associate professor in the Department of Pediatrics and

Division of Dermatology at Seattle Children's Hospital and University of Washington School of Medicine.

She's a triple board certified. She completed her residency training in both pediatrics and Dermatology, as well as a fellowship in pediatric Dermatology at University of California, San Francisco. She serves on holds many leadership roles on large number of committees.

At Seattle Children's Hospital, University of Washington, as well as on national committees, she serves as a chair for the International and Global Outreach of Society of Pediatric Dermatology and on the Education Committee, Executive Committee and Chair of the Advocacy Committee.

Of the American Academy of Pediatrics section on Dermatology. Her research areas of interest include pediatric pigmented lesions, vascular anomalies, laser surgery, and procedural dermatology. Dr. Gupta, thank you very much for accepting our invitation.



Hank Lipsitt 2:10

It.



Kamat, Deepak M 2:12

I enjoyed your presentation at NCE, so that's why I invited you again here. We are looking forward to your presentation.



Gupta, Deepti 2:20

Well, thank you. Happy New Year to everyone and good morning. Thank you, Dr. Kamat, for inviting me and I'm really excited to talk to you guys this morning. So the topic I'm talking about today is dermatologic conditions and manifestations in children with skin of color.

I have no disclosures or relevant financial relationships to disclose today. So I hope at the end of this presentation that you're able to identify skin disorders that occur more often in pediatric patients with darker skin types. There are different manifestations of dermatologic diseases that happen in.

Individuals with darker skin types as compared to individuals of lighter skin types. So they may present differently, and that's what I want to highlight today. There may be different morphologies and presentations, and then individuals with skin of color may also have different complications of common diseases.

And therefore I want to kind of help identify an appropriate treatment as well as

management, as well as incorporating different cultural practices that might affect individuals with darker skin tones and identify the conditions that they may present with.

So why is this relevant? So according to the US Census, the population is growing of individuals with higher skin phototypes, and we're seeing that skin color actually has a.

You know, a lot to do with an individual's self-identity. And if you look at globally across the world, there's a lot of importance played or paid to skin color. When we look at skin color, we actually have really limited tools to accurately measure skin color. One of the older kind of.

Tools that's oftentimes referenced is Fitzpatrick skin type and that you can see on the bottom left of your screen and that really shows the grade of different skin colors from kind of a lighter kind of pale white to kind of more black or darker brown. The Fitzpatrick skin type also.

Not only has to do with skin color, but also the ability of an individual to kind of burn or tan. And so you can see some of the scales there that are that are described in the literature. None of these are validated and and so we still have to do more work and kind of.

Validating these color scales and that is being looked at currently. And then when we look at all of our textbooks, our articles, we actually see the skin of color is actually poorly represented. So here we see on the right hand side of your screen 2 individuals with atopic dermatitis.

There are these kind of hyperpigmented and kind of erythematous plaques on the popliteal fossa, and you can see in an individual with darker skin tone that the erythema is really obscured. Both of these patients have atopic dermatitis. It's a very classic location being the popliteal fossa, but it looks very differently.

And what we found is that when we looked at pediatric Dermatology textbooks and we classified the images that were in that textbook by skin tone, we found that over half, so 50 to 60, almost 70% of the images that were in the prominent pediatric Dermatology textbooks.

Were all of individuals with lighter skin tones and then looking at medium and brown skin tones, that was maybe about 1/4 percent of the images. And then the darkest skin phototypes were really poorly represented, 6 to 10%.

And this really, you know, when we look at these textbooks, this is how we identify these conditions. And so there's really a disproportionate number of darker skin tone

images in in our in our, you know, standard pediatric textbooks.

And we see that also with common Dermatology journals as well. So looking at the Journal Academy, Journal of the American Academy of Dermatology, we only found that almost about 5% of images were of individuals of darker skin types.

And then in our pediatric Dermatology journal, only about 8% of images were of darker skin types. And so this really kind of skews the way we think about dermatologic conditions and leads to delays in diagnosis as we're not able to identify the representation.

Of images in darker skin tones are not as able to be identified as ones in lighter skin tones. And so here we see two images of two individuals with acne vulgaris. And you can see with the individual with lighter skin tone that erythema is able to be identified much easier, whereas on the images on the right there's a lot more dyspigmentation.

Pigmentation and hyperpigmentation that's left behind, which can be really stigmatizing to individuals with darker skin tones and acne. Pediatric Dermatology textbooks definitely had an underrepresentation, but also in the Nelson's textbook of Pediatrics.

There was a significant disproportionate number of images and lighter skin toned individuals, so almost 94% of the images that were in this textbook were lighter skin tones. But what else was identified was that the types of images for different conditions were different based on skin type, so common.

Conditions like acne, molluscum, infantile hemangiomas, things that are very common in the population had more likely lighter skin tones that were represented. But then diseases that could be stigmatizing such as leprosy infections, sometimes had representation with darker skin types. So not only.

There was there a skew in the in the representation and the skin colors that were images that were represented. But also individuals with darker skin tones tend to have more representation with maybe more stigmatizing diseases. And besides our textbooks and journals, we also see in social media.

That there is a lot higher percentage of individuals with lighter skin tones that are represented in social media images and videos, and we also find that in different types of mobile applications as well.

That darker skin tones are actually not as well represented in kind of mobile educational applications as well. So overall, we're seeing that there's a lot less representation, which really has to do with our education as as a group.

So representation really matters. And the reason for this is that when we see different images in certain skin types, that's how our mind kind of thinks about those patterns. And when we don't see the erythema as much or we see different presentations of common skin disorders in individuals with darker.

Skin tones. That really leads to delays in diagnosis. Delays in diagnosis means maybe more complications faced by individuals with darker skin tones, delays in treatment. There's can be increased risk of complications and oftentimes misdiagnosis, and that can lead individuals of darker skin types to actually have distrust in the medical system.

And a lot more increased stigma from their dermatologic conditions. So I hope that in our time that we can actually identify some of the common ways that common skin disorders can present in individuals with darker skin types. So we'll start with our first case.

So this is a 7 year old East Indian boy who presents to my clinic and he has this well demarcated depigmented patch that you can see on the lower left chin kind of going up to the Vermillion border. He also has a melanocytic nevus that's within this that he's had.

Since birth, but parents are very distressed. They're very worried about this condition. When you look at this, what are some things that are going through your mind as far as possible conditions that this individual may be facing? The key kind of morphologic features are this sharp kind of demarcation and the.

Depigmentation. The color of this patch is really bone white and this is representative of vitiligo. So vitiligo is an autoimmune condition. So the T cell lymphocytes are actually attacking the melanocytes, the pigment producing.

Cells and it can affect areas of the skin, but also the mucosa and of the hair as well.

So we can see this kind of poliosis that you're seeing in the lower right-hand corner.

And that's because each individual hair follicle has a melanocyte within it and the the immune system is attacking it, causing kind of depigmented white hair.

This is an acquired condition and oftentimes a lot of our treatments are not able to get approved by insurance because vitiligo sometimes is considered a cosmetic condition, but it really is not. It is really a medical disorder. And so here we're seeing an individual with these well demarcated.

Depigmented patches on the hands, the arms, also on the torso. Vitiligo most commonly presents as bilateral and symmetric, and it can be really devastating to individuals that have them, especially with individuals with darker skin tones.

It's a really common disorder. It presents about half a percent to 2% of the world's population. The prevalence in the pediatric population is not known, but most cases are acquired actually early in life. But onset prior to two years of age is actually pretty uncommon.

There's no predilection for a certain type of race or ethnicity or gender.

Vitiligo has really profound socioeconomic and psychologic impacts. As we kind of talked about before, you know, skin color really has a lot to do with your self-identity. In certain cultures, having vitiligo can cause significant stigma.

Sometimes causing kind of economic impact, psychologic impact can have effects on, you know, relationships in the future and really can have a lot of comorbidities such as mental health disorders, depression, anxiety that can happen only.

Not only in the individuals, but also can be really distressing for the families, especially with individuals with darker skin tones. Many individuals from kind of India, Africa, vitiligo has a significant stigma in those communities.

And so how to identify vitiligo compared to other other conditions. So as we kind of talked about it's depigmentation, it's really this bone white coloration of the skin and also of the poliosis of the hair and it presents kind of symmetric and bilateral.

So here we're kind of seeing that, you know, if we drew a line kind of right in the middle of this individual, we would see that it's almost a mirror image on both sides. And that's one of the key features of vitiligo.

And it's very well demarcated. We can almost draw, take a pen or pencil and kind of draw where the lesions start and stop. And that really differentiates from some of the other kind of dyspigmentation, hypopigmentation conditions that I'll get to as well.

Here's another individual with kind of segmental vitiligo. So you can kind of see that this does not cross midline. It's one kind of segment of the skin. Again, that bone white color, well demarcated, and those are kind of some of the features of vitiligo itself.

So here we're seeing another individual with segmental vitiligo. So again, this is 1 segment of the skin. It does not cross midline. It's not bilateral and symmetric like most vitiligo is.

And the this type subtype of vitiligo. The good news is that it usually stays within this segment and it doesn't spread to other parts of the body, which can be reassuring to the the family, but it can be actually more resistant to treatment and harder to treat and it affects about 30% of cases.

With vitiligo and it tends to have a little earlier onset. We see this a little bit more commonly in the pediatric population because it has earlier onset than more classic vitiligo. So again, unilateral in one segment of the body is just another way that vitiligo can sometimes present.

But again, you're seeing that depigmented kind of bone white color and well demarcation and within the lesion you're seeing these small circular areas which are kind of areas that the pigment may be returning in vitiligo the when when repigmentation.

Pigmentation happens. It happens around the hair follicle. The melanocyte in the hair follicle starts to produce pigmentation and that starts to come up through the hair follicle in a small circular area and then spread to the rest of the patch of the vitiligo for repigmentation.

So how do we diagnose vitiligo? So one is clinical, the features that we talked about that depigmented color being well demarcated in fair skinned individuals. Sometimes it can actually be very hard to identify and it may not be apparent until the summer months when the surrounding skin might get a little bit more tan and you might be able.

to see those depigmented patches. One way that you can actually identify this is by using a woods lamp. What a woods lamp does is it projects a kind of a bright white light onto this patch. Now our melanocytes, they absorb the light.

Light. But in deep, but in vitiligo, there's depigmentation. Those melanocytes are temporarily kind of arrested. The lymphocytes are attacking them, and so there's nothing to absorb the light. And so when you project this woods lamp onto the skin, you're going to get a bright light.

A white reflection back at you and you can see that here on the bottom right you turn off the lights, you apply the woods lamp and you can see that bright white coloration coming back to you. You can actually use a woods lamp also for pigmented lesions. So sometimes we use it in our practice for a.

Suspicious lesion for like melanoma. Because there's a lot of melanocytes in pigmented lesion, the light will be absorbed and so it actually will look darker. So you can actually see the outline of melanocytic lesions much better with the Woods lamp. Now on the bottom left you see.

A woods lamp that we sometimes have in our dermatology clinics. You could actually buy a black light flashlight just on online and these are actually used in many areas for scorpion identification. The venom of the scorpion actually has something that

fluoresces with the.

Woods lamp. And so you can actually buy these flashlights for pretty inexpensively, like 1015 dollars, and you can actually keep them with you in your clinic and help use them to identify depigmented conditions as well.

So who gets vitiligo? So vitiligo is an autoimmune condition. Individuals that have vitiligo, there's sometimes a predisposition in the family of autoimmune conditions, so there's definitely a genetic component.

But there's also some genetics plus environmental factors that sometimes can make individuals have vitiligo more often. Vitiligo tends to come up in areas of trauma, so cabnerization can happen. If you have a surgery, sometimes vitiligo can hone in on those areas. Here we're seeing an individual that.

Went through a thyroid surgery and we're seeing the areas of vitiligo hone into the scar and vitiligo, like a lot of autoimmune conditions, can sometimes come up more when there might be some physiologic or psychologic stressors. It can come up in times when maybe our immune system is not.

Functioning the same, such as pregnancy or sometimes even in adolescence, we might see vitiligo kind of occur during those times.

And so how do we know if vitiligo is is active? So when vitiligo is more active, we can see it coming up in areas of friction and trauma that Kevner phenomena. Sometimes we can see this trichome phenomena, which you can see in the picture in the left where we see these three zones of pigmentation. We see depigmentation.

We see some hypopigmentation starting and then you can see some kind of erythema sometimes at the periphery as well. So you can see these three zones of pigmentation. It's a marker of disease and sometimes you can also see these confetti like small tiny little depigmented macules that are starting and then they will coalesce to bigger patches.

Showing the marker of disease for vitiligo. And then you know what work up should we do when we see an individual with vitiligo? What's vitiligo associated with vitiligo is autoimmune condition and so we oftentimes see increased autoimmune conditions in the patient or first degree relatives.

The most common is thyroid disorders, and so individuals that present with vitiligo, I do a good review of systems to see if there's any concern for a thyroid disorder, things like hair loss.

Energy levels, being more tired, maybe weight loss, thinking about some of those things and then maybe screening for a TSH with a T4 or thyroid antibodies. Other

autoimmune conditions are here located on the in the chart on the right hand side we can see.

See alopecia areata, which is a autoimmune condition where the hair follicle is attacked and causes these alopecia kind of ovoid and circular patches on the scalp. We also see things like type one diabetes, pernicious anemia. The other autoimmune conditions can be more likely, so a good review of systems.

Um is is warranted. Individuals with vitiligo can also have systemic involvement, so there's melanocytes within our eyes and then also our ears. There was a recent study looking at hearing loss.

In individuals with vitiligo and so making sure that we are also screening for any ocular concerns and any auricular issues or hearing concerns.

Because melanocytes are present there and they may be attacked as well. And then there's some rare genetic syndromes like Void Koyanagi Harada, which can present with vitiligo and other associated symptoms as well. Doing a good review of systems is also important.

So how do we treat vitiligo and how do we know if our treatment is working? So one thing to know about vitiligo is that individuals with longer standing disease. So if it's been present for greater than one or two years, they actually have a lower response rate to treatment.

And then those with an acute onset. So that is one argument to kind of treat vitiligo early. So individuals that present with vitiligo using the therapies that we have, especially when they're in more stigmatizing locations.

And then how does vitiligo work? So for repigmentation. So the repigmentation happens around the hair follicle. And So what you start to notice when you use your treatments is that a large patch of vitiligo will start to get these circular areas of repigmentation, small tiny little circles and that's because the melanocytes.

Are starting to repigment right around each hair follicle and then they start to connect and bridge themselves to each hair follicle, kind of coalescing into larger areas of repigmentation if an area has no hair.

That area is going to be a lot less likely to repigment. So acral surfaces, hands and feet, those are harder to repigment if you have a hair follicle that has turned white.

So if you have white hair poliosis, that means the melanocyte is also not active.

Currently, and so once the hair turns white, it's much higher, harder to get repigmentation as well. So just a couple things to kind of note if your treatment's going to be successful or not. We also should look at comorbidities of individuals

with vitiligo and make sure to treat any mental health issues and some individuals use camouflage as well to.

Treat vitiligo. So what of what are our available treatments? So topical corticosteroids are probably the most kind of studied treatment that we have, usually using higher potency topical steroids and then doing regimens where you know it's going to require more chronic treatment.

And we don't want to see side effects of topical steroids such as atrophy, stria, telangiectasias. And so oftentimes using topical steroids maybe twice a day for one or two weeks, then taking a week break and then using it again for one or two weeks. You can use this also with non steroidal options such as topical calcinerin inhibitors where you alternate a.

Topical steroid with a topical calcinerin inhibitor and then you could use topical calcin inhibitors such as taprolimus or pemaclolimus on the face and thinner skinned areas more chronically to see if you can get re-pigmentation with a vitiligo. I usually do about a three-month trial to see if we can get re-pigmentation.

The other things that are really exciting is that for the first time ever, we have actually a FDA approved medication for vitiligo in pediatric patients. It's currently approved for 12 years and up.

Ruxolidinib is a medication that has been shown not only to be a treatment for mild to moderate atopic dermatitis, but also vitiligo. You can use this medication twice a day and they showed that by twenty-four weeks.

There was at least a 75% improvement in or at least a 30% improvement in vitiligo in about 3/4 of the individuals that are using it. So pretty well tolerated, though you could get some local side effects such as irritation and acne.

Other treatments If an individual is having rapidly progressive vitiligo, sometimes using oral corticosteroids to halt the process, and if they have maybe greater than 10% body surface area involvement, thinking about phototherapy with narrowband ultraviolet light therapy can also be helpful as this suppresses the immune system in the skin.

In gets the lymphocytes to not attack the melanocytes anymore and gets repigmentation to happen and then oral JAK inhibitors as well have been described.

So one thing I wanted to highlight is that vitiligo. I get a lot of referrals for vitiligo and sometimes it's not vitiligo and there's many conditions that.

That can mimic vitiligo. And so I just wanted to take a moment to highlight some of those mimics. So here we're seeing vitiligo again, that depigmented, well demarcated

patch. Other things that can mimic vitiligo very commonly is pityriasis alba. So pityriasis alba is a mild form of atopic.

Dermatitis and oftentimes individuals may not actually have those ill-defined kind of erythematous scaly patches. What they may present with is more of this ill-defined hypopigmented kind of macules or patches, oftentimes in more sun exposed areas. So here we're seeing an individual and if you think about those pictures.

The vitiligo that we just saw, the pityriasis alba is a little bit more faint. The border is a little bit more feathery. It kind of goes into the periphery. You're not exactly sure where it starts and stops, and it's hypopigmented. So if you did put your woods lamp on this, it would not give you as bright white reflection coming back.

And sometimes with Pityriasis alba, because it is a mild form of atopic dermatitis, you're going to see some scaly, some fine scaling as well. Individuals might have a history of atopic dermatitis or other atopic conditions such as asthma or allergies. And oftentimes we start to see this in the spring or summer when the surrounding skin gets tan and then you're starting to see these hypopigmented patches and it's most noticeable in individuals with darker skin tones. So this is a very common condition that we see.

Oftentimes on the face and the upper extremities, there's another condition called progressive macular hypomelanosis. This is, and you can see this on the picture on the left hand side, these kind of small ovoid hypopigmented macules that are scattered all along the torso on the.

Back here and these are kind of ill-defined hypopigmented macules that favor the trunk. They're very common in adolescents and young adults, and you see them more commonly in individuals of darker skin types. And this is actually driven by P acnes.

And so that's why we see it in the adolescent population. They and it's mostly on the torso. If we actually used our Woods lamp, sometimes we can actually see the presence of some fluorescence within the hair follicles. And you can see that here in the bottom picture.

So another plug for kind of a woods lamp to help identify this, but it's just a very faint, these ovoid hypopigmented macules that you can see on the torso and we treat it because it's driven by P acnes. You can actually treat it like acne vulgaris using a benzoyl peroxide, you know, wash in the shower or a salicylic acid-based.

Wash and then also sometimes topical clindamycin solution for the back. But this is an entity that you may have come across in your practice but may not have

known the name for it or the etiology, but progressive macular hypomelanosis.

And here's another kind of picture of it in another individual. Again, you're seeing these kind of hypopigmented circular ovoid macules on the torso.

And then tinea versicolor. So tinea versicolor is caused by malassezia, a yeast, also known as *Parosporum ovale*. It's been renamed many times in the past, and this can oftentimes be mistaken for.

Vitiligo as well. The way to distinguish tinea versicolor is that tinea versicolor, this Malassezia, it likes to grow in oil rich areas and so we really see this on the face, the neck, the upper back, the anterior chest where we have a predominance of oil glands. Those are also the same.

Areas that we see a predominance of acne in because acne is also driven by sebum production in the pilosebaceous unit. When we look at the tinea versicolor, you're going to see these kind of more kind of well demarcated ovoid kind of circular areas that might coalesce into larger patches.

If you scraped these patches, actually you would get a lot of inducible scale. It would just have a plethora of scaling that would be released, which is different than vitiligo. There's no scale associated with vitiligo and we see, we see tinea versicolor more prominently on the the head.

And neck and the torso. We really don't see it on the legs or the lower also driven by malassezia. We can treat it with ketoconazole, ketoconazole shampoo, antifungal treatments, post-inflammatory hypopigmentation. So this happens in individuals with dark.

Darker skin tones as well. And what we see is if they have any type of rash, whether it be eczema, some type of dermatitis, some type of viral xanthem. After that kind of erythematous rash resolves, they can get these hypopigmented macules and patches in the area of inflammation.

And when they get sun exposure, that difference can actually be highlighted even more. This will fade over time, but it can take three to six months to do so. And if they're getting a lot more sun exposure, the surrounding skin's going to be more tan. It's going to take longer to have this post-inflammatory hypopigmentation resolved. So one question to.

Ask is is was there any preceding rash before you had these hypopigmented areas occur and you'll see that the hypopigmented areas will be in the same distribution as where the erythematous rash was before. Hypopigmentation again is not going to be bone white, it's going to be lighter in color. It's going to be the borders are going to

be a little bit more.

Feathery and illdefined.

And then another thing that vitiligo oftentimes gets mistaken for is a condition called nevus depigmentosus. This is actually a type of birthmark, and this is actually present at birth, but it may not be apparent as.

Individual's skin color actually gets darker and develops more to their natural state within the first year to two of life. So initially when a baby or infant's born, the skin color will be lighter and so you may not notice these birthmarks, but you may.

They may start to develop kind of within the first year of life as the skin tone becomes darker in the background. Also with sun exposure, you're going to see this start to become more apparent. But Nevus depigmentosus, many of these birthmarks can be depigmented, so they can be that bone white kind of color, but they also. Could be hypopigmented, so not all of these birthmarks actually have are completely devoid of pigmentation and they present more as like isolated macules or patches or segments.

Of depigmentation. Now one distinguishing factor from vitiligo is the border again is a little bit. It's feathery. It's not as smooth and sharp as we see in vitiligo, and it can grow over time in proportion to the individual, so it's going to kind of retain its shape.

Retain the segment that it's in and it's going to grow with with the individual.

OK, so now we're going to move to our second case. So we just kind of went through vitiligo and kind of some of its mimics. This is a six-year-old black male who comes in with these hyperpigmented lichenified plaques.

On the knees, the lower extremities, as well as numerous kind of ill-defined, hyperpigmented, slightly erythematous patches and plaques with overlying scale. He also has some areas on the arm here that are kind of increased like patches of.

Circular patches of increased follicular prominence and cirrhosis of his skin. So I just want you to take a moment to think about what are some things that might be going on with this patient? What are some conditions that you might be thinking about if you saw this patient in your practice?

So this individual is presenting with atopic dermatitis and atopic dermatitis is is very common in individuals that have darker skin tones, but also a very common condition in the pediatric population in general.

But in individuals with darker skin types, the atopodermatitis can actually present a little bit differently. And so I want to highlight some of the morphologic features that

that occur. So one thing that we see with individuals of darker skin types is that there's much higher rates of dyspigmentation. So there's.

A lot more hyperpigmentation and sometimes even hypopigmentation in areas where the atopic dermatitis was. And we can see that in these pictures here that the plaques are very, very hyperpigmented. The erythema is oftentimes obscured and so that can lead to a lot of delays in diagnosis.

You know, we can't pick up the erythema as much here, though we can see it a little bit in the popliteal fossa. But many of these condition plaques do have erythema within them too. Looking at the border, sometimes you can pick up that erythema better, but it's definitely obscured as compared to individuals with lighter skin tones. We also see a lot more prominent lichenification. Lichenification means thickening of the skin, increased prominence of skin tension lines and so and that's harder to treat. It requires maybe stronger topical corticosteroids or maybe systemic medications. But here we're seeing again on the anterior legs and on the knees, just a lot more thickening, a lot more lichenification. Individuals of darker skin tones can also present with this follicular and papular morphology, as we see in this kind of lower picture. And so there can be more of a papular atopic dermatitis.

Or follicular prominence. And we also see numular morphology. Numular means coin-shaped and we can see these more coin-shaped plaques of atopic dermatitis as well. And those can also be more refractory to treatment or harder to treat with topical corticosteroids. So these are just highlighting some of the features.

that of common atopic dermatitis that we see very often, but how it can present a little bit differently in individuals of darker skin types. And so when we think about treating atopic dermatitis, one, you know, being able to identify these common kind of morphologic features

is really important, but the pigmentary changes are really, really distressing to patients. And so trying to be more aggressive with treatment, maybe increasing our strength of our topical corticosteroids or moving to systemic treatments to kind of really prevent the erythema that's driving all these pigmentary changes.

And then also educating patients that these pigmentary changes actually are not permanent, but once the atopic dermatitis is better controlled, those pigmentary changes may still last and they're they may not always be markers of active disease. They will improve with time, but sometimes it can take, you know, 3-6 months to do so. And so a good sunscreen and sun protection is also important to help normalize the skin. And so those are some things just to kind of educate patients about.

And realize that that it is quite stigmatizing to patients.

When we look at individuals with darker skin tones, we see that there's not only delays in diagnosis of picking up common disorders, but they'll also tend to have more treatment resistant disease. And that's because of the lichenification, sometimes the nummular morphology delays and diagnosis diagnosis. They also have increased.

Hospitalizations as compared to non-white counterparts. They have greater risk of infection and they have more persistent atopic dermatitis, which can affect their quality of life as well. And that may be due to kind of multiple reasons as well.

And when we think about some of the things that are deeply rooted in our in our healthcare system, we see that, you know, when we look at our textbooks, we look at our journals, there's a lot less representation of these common skin disorders in individuals with skin of color, which can lead to delays in diagnosis.

That can really lead to kind of some inequalities that we see in our healthcare system, less access, delays in diagnosis, maybe mistrust of the the system. We also see that individuals living in areas with higher rates of air pollution living near.

Airports with kind of more housing instability, those things can actually drive atopic dermatitis. And we're seeing that that if you look around kind of airports or industrial areas that the socioeconomic status of individuals in those areas tend to be lower.

And so environmental pieces actually drive a lot of atopic dermatitis as well and increase the prevalence, the incidence and severity and and increase risk of indoor allergens as well and looking at zip codes and neighborhoods, neighborhoods with lower socioeconomic status.

And more more poverty, more income disparities, housing instability have much higher rates of atopic dermatitis and that tends to be sometimes in the individuals with darker skin tones. So there is a lot of factors that can drive atopic dermatitis in individuals with.

Higher skin phototypes that make their disease more severe that we should be aware of as well. So this is just kind of showing kind of erythema in individuals with skin of color and and sometimes it's much harder to really pick up that erythema. It can be more obscured and so this is just kind of.

Some close-ups of really trying to look closely at the periphery of the lesions and look for that erythema, because sometimes there can be some hyperpigmentation that could be mixed in with it.

So just highlighting again the common kind of ways that atopic dermatitis can

present in individuals with skin of color. Sometimes they have more of this papular kind of eczema predominance and we can see that here more of these follicular kind of based papules.

Just looks different than the atopic dermatitis that we usually see the which is usually more ill-defined kind of erythematous papules and plaques and it can be more of this papular kind of look and there can also be more follicular prominence and that can actually be active atopic dermatitis if you look real closely at the skin. This accentuation of the follicles should be treated with topical steroids as well, as that's a common variant that we see in individuals with skin of color. And then this numular variant as well, coin-shaped erythematous plaques that can be very common in atopic dermatitis, especially in individuals with.

Of color, and we see this more commonly in infants as well. It oftentimes gets mistaken as tinea, but some ways to distinguish it from tinea infection is that usually in tinea infection the scaling is at the periphery of the lesions and then the tinea is actually moving outward and infecting more.

Keratinocytes here with numular atopic dermatitis, the whole lesion might have some fine scale throughout. There's no central clearing. Oftentimes with tinea infection, you get some central clearing as well. So some way some ways to distinguish it from tinea infection.

And then we see a much higher rate of scalp atopic dermatitis as well. So atopic dermatitis can also affect the scalp. It more commonly affects individuals that are black, and it can also be mistaken for tinea infection as well, or seborrheic dermatitis. And so just realizing that if there's other sequelae of atopic dermatitis and kind of this erythema, crusting, scaling, itching of the scalp that atopic dermatitis may be of the scalp as well. If you are concerned about tinea infection, always good to do a culture you can check.

Also for cervical lymphadenopathy, which is more prominent with tinea infections, can treat if it's atopic dermatitis with a topical corticosteroid solution. Oftentimes using solutions rather than ointments or creams are better for the scalp as they are able to be massaged into the scalp and get to the actual scalp.

Better.

And here's just another way that atopic dermatitis can present. This patient has a lot more thicker scale kind of throughout the scalp. And so sometimes using a ketoconazole shampoo to kind of help decrease some of the yeast that might be in the scalp or a tar based shampoo to kind of break up the scale.

Get to the erythema below the scaling with the topical steroid can be also very helpful.

And then here we're seeing some of the dyspigmentation and some of the kind of sequelae or complications that individuals with atopic dermatitis can face. So one thing that's more prominent in individuals with skin of color is that you see a lot more pigmentary alteration in individuals with skin of color and that can be.

Both hyperpigmentation, so darker skin areas that can be left behind even once the atopic dermatitis has resolved, but then also hypopigmented areas. So we saw this with pityriasis Alba, but also kind of a post-inflammatory hypopigmentation can be seen for individuals that have atopic dermatitis.

And this is really, really common. Again, it may not always be a marker of active disease, so it does not need to necessarily be treated with topical steroids if there's no erythema, ongoing itching, or kind of more raised, like kinified nature of these areas.

Educating patients that this will resolve over time and that good sunscreen and sun protection can help normalize it. And then sometimes because of the scarring as we see or cause of the itching as we see in the lower right-hand picture, there can also be sometimes significant scarring in patients with atopic dermatitis and that can present as.

Kind of de pigmented areas or kind of atrophic areas as well.

So just to kind of highlight, you know, atopic dermatitis, you know, it's a defect in the skin barrier and many things drive atopic dermatitis. We saw that for some individuals, environmental factors like air pollution, indoor allergens can definitely activate atopic dermatitis.

Stress. If you get infection and there's like a physiologic stress on your body, sometimes that can trigger atopic dermatitis. When there's breaks in the skin, infections like bacteria, viruses can definitely get into the skin and drive atopic dermatitis and pruritis a lot more. Changes in weather. We see colder weather, drier weather.



Reeves, Stephanie 45:11

No, no.



Gupta, Deepti 45:19

Also drive atopic dermatitis. So many things can kind of trigger it. And we see that

with management that we have to address some of the triggers and also address some of the issues. So when we think about atopic dermatitis, there's a defect in the skin barrier. So really dry skin care, gentle skin care is really important.

Controlling the inflammation, topical steroids are usually the first line treatment, treating any infection that might be a trigger, treating the itching and then really addressing for our individuals with darker skin tones, the pigmentary alterations as those can be very distressing for the patient.

And the psychologic impact that this has on the patient. There's a lot of comorbidities that patients with atopic dermatitis face, such as depression, anxiety, and it really disrupts a lot of the family dynamic as well. Many times patients are not sleeping and because they're itching at night and and parents are.

Also not sleeping because of this, so addressing all of these components will give us the best treatment for atopic dermatitis.

OK, our third case. So this is a 15 year old who presents with these kind of erythematous papules as well as hypo hyperpigmented macules and mix within them as well as open closed comedones. So this individual has acne.

But also significant hyperpigmentation. And that's what we see with acne, vulgaris and darker skin toned individuals is that they have a lot of post-inflammatory hyperpigmentation. And oftentimes the hyperpigmentation can be much more distressing and affect their quality of life than the acne itself.

It can be really stigmatizing, lead to bullying, lower self-esteem, lower self, less social interactions. And so therefore with individuals with darker skin tones really treating the acne more aggressively. So starting that topical retinoid, which is topical retinoids are your most effective.

Treatment for acne, starting those topical retinoids early, but then also realizing that a lot of acne treatments are going to cause a lot of drying. If we have a lot of dry skin, then that patient is also at risk for post-inflammatory hyperpigmentation or maybe even hypopigmentation and so.

Being aggressive with our treatments, but then also balancing the drying effect, making sure that there may be using a emollient that's oil free and non comedogenic so they can use the retinoids more often. And then don't be afraid to escalate treatment and even move towards systemic antibiotics and even isotretinoin.

Because and being because that dyspigmentation can be something that can take quite a long time to resolve for patients. So one other thing to kind of ask individuals is what kind of products they're using because we see that individuals with darker

skin tones may have.

Hair that might be the scalp that might be more dry and so they may be using more oils into their scalp and then based on their hair type being maybe thicker or maybe more kind of curly, they may be using certain products. And so there is a term called pomade acne where we're seeing a lot more predominant.

Of acne along the hairline as well as on the forehead because of the hair products that are thick, greasy, oily that individuals might be using. And so this is just something to assess. If you're seeing a lot more acne on the forehead, just ask about what kind of hair care products they're using. Are they using anything?

That's occlusive, such as like a bandana or kind of some type of hat that might be occluding the sebaceous glands and getting oil trapped in these areas that might be driving acne. So looking for certain things that might be more prominent in our individual skin color because of their hair care practice.

That might be driving their acne. And then how do we treat acne in individuals with darker skin tones? And this applies to lighter skin tones as well, but really topical retinoids, that's going to be something that we're going to want to definitely initiate with acne. So tretinoin, oftentimes lower strength.

Some if we're if we're worried about dryness, so 0.025%. You could also in individuals that might be really prone to dryness, you can use things like adapalene. Retinoids come in a couple different ways. They come in lotions, which can be a little bit more hydrating, a little bit easier to spread over larger areas.

They can also come in creams, which tend to also be a little bit more hydrating and not as drying, or they come in gel formulations. Gels tend to be much more drying, making sure they're using sun protection. So tinted sunscreens are actually really important to use in this population. They're full of iron oxide and they can blend within the skin.

They don't leave that ashy kind of look for sunscreen and so recommending sunscreens that are mineral based active ingredients being zinc oxide, titanium dioxide, but tinted sunscreens can be really helpful and then adjuvant treatments to retinoids, azoic acid may be using topical and.

Biotics, benzyl peroxide, dapsone topically or hydroquinone which is can help with hyperpigmentation can be helpful things to address the acne more aggressively and also some of the hyperpigmentation.

And then I just want to dig quickly in the last few minutes before we turn it over to question and answers, just highlight some other conditions to be aware of that might

present more often in individuals with skin of color. So Acanthosis nigricans. So Acanthosis nigricans are these velvety hyperpigmented plaques.

That happen in intertriginous areas. The most common locations is the back of the neck and you can see that velvety hyperpigmented plaque that we see. You can also see it in the armpits and they tend to happen in individuals with darker skin tones and it's a marker of insulin resistance.

It does not mean that you have diabetes, but it does mean that your insulin is working much harder and that you may be predisposed to developing diabetes. And so in individuals where you see acanthosis nigricans and you can definitely see this in your adolescent population.

And young adult population, you would want to maybe screen for diabetes, hemoglobin A1C, fasting glucose and maybe even look for other comorbidities of metabolic syndrome in these individuals.



Rodriguez, Luisa 51:52

Yeah.



Gupta, Deepti 51:56

Recommending diet and exercise changes to help kind of deter that course that might lead to diabetes. It's really important to educate patients about and intervene early. Here's another individual with Acanthosis nigricans. You can see those hyperpigmented kind of plaques.

On the anterior part of the neck, hidradenitis suppurativa. So this is a condition, an inflammatory condition where you get these sinus tracts, large boils in areas where there's increased pilosebaceous glands. So it happens more in the axilla and in the groin.

It occurs in adolescents. Oftentimes it's in these hidden areas and causes a lot of drainage, which can be painful and have kind of sometimes an odor to it, which can be really distressing to patients. It happens in adolescent patients and so making sure to kind of do an exam.

Many teenagers may not bring this up with you, but this is treated like an acne like condition. So sometimes we use the same kind of treatments as we do in acne, such as systemic antibiotics, isotretinoin. Sometimes there can be a hormonal kind of piece to this and so sometimes hormonal treatments just like an acne such as.

OCP spironolactone can be used and then sometimes we use biologic treatments as

well for this inflammatory conditions such as TNF alpha inhibitors when it's quite severe, debilitating, scarring and painful. But just to kind of highlight this this condition that can be seen more as well in darker skin toned individuals.

Acne keloidalis nucae where you get tufting of the hair follicles as well as these kind of keloid like papules on the posterior part of the neck. This can be cause a lot of scarring and permanent alopecia and these keloidal areas.

Areas can be really distressing cosmetically and can be painful to patients. This can be treated oftentimes with isotretinoin or intralesional corticosteroid injections and then keloids. In general, keloids are kind of an increased inflammatory response to healing and we see keloids much more often in individuals with darker skin.

Types. Most common locations for keloids tend to be anterior chest, but we can also see it behind the ears with the piercings. And so these can be treated with intralesional corticosteroid injections or combination of CO2 laser and intralesional corticosteroid injections, but are much more prominent in individuals with skin of color as well.

So I hope that at the end of by the end of this presentation you're able to now identify some common ways that certain dermatologic conditions can present in individuals with increased skin pigmentation.

There's a lot of social impacts and complications that individuals can face, and I hope you were able to kind of think about some of the treatment regimens that we might want to incorporate for this patient population. Here's some references that you can that have some good information as well.

And I can take any questions. I appreciate your time this morning.



Kamat, Deepak M 55:01

Thank you, Doctor Gupta for that wonderful presentation. Let's see if anybody has any questions. I'm watching monitoring chat box. Yeah, there is a question by Doctor Hanson. Doctor Hanson, you can go ahead and ask the question.



Hanson, Elizabeth R 55:17

Hi Dipti. So Dipti and I were interns together I think on our first rotation. So I was very pleased to see you on the schedule. Thank you for that talk. It was really helpful and I apologize if I missed you saying this because my wife I dropped in and out, but do you have any references that you recommend? I know Visual DX you can change.



Gupta, Deepti 55:18

And.

Yeah.



Hanson, Elizabeth R 55:35

Skin tones. Are there any other really good visual references for skin of color?



Gupta, Deepti 55:39

Yeah, yeah, great to see you. Yes. So yes, Visual DX does have some skin of color kind of references. There are color atlases for pediatric Dermatology that specifically kind of address skin of color. So there are actually some.

Some dedicated textbooks, the Skin of Color Society, which you can actually go online and look up as well for for dermatology, also has some some great pictures as well. And then you know a lot of the textbooks are aware of this kind of disproportionate number of.

Lighter skin tone images and so newer versions should have a little higher predominance of skin of color textbooks, but there are a couple that are more for skin of color that you can look at too.

Yeah.



Kamat, Deepak M 56:33

Any other questions, comments for Doctor Gupta?

And there is a question from Doctor Manlik. Can you talk a little more about post-inflammatory hyperpigmentation in patients with skin of colour, specifically how best to treat and duration for patients understanding?



Gupta, Deepti 57:02

OK.

Yeah. So, yeah, this is definitely something that a lot of patients experience. And the best thing to do is 1 treat whatever the underlying issue is that's causing the hypopigmentation. So if it's atopic dermatitis or another inflammatory condition, making sure you're treating that appropriately.

And then the post-inflammatory hypopigmentation, it can last three to six months, but if the individual is going out into the sun and those areas are getting a lot of sun exposure, then the surrounding skin is going to get more tan. And that difference between the hypopigmented areas and the more tanned areas is going to last

longer.

And therefore it's going to take longer to resolve. And so good sunscreen and sun protection, wearing sun protective clothing like hats can also be very helpful in minimizing this or kind of helping the.

The hyperpigmentation to normalize quicker, but just letting them know that this is not permanent. It will resolve over time, but it may take a little bit of time to do so.



Kamat, Deepak M 58:10

There's another question. When do you would you do workup in BT Lego? Percentage of body area involved? When do you start?



Gupta, Deepti 58:18

Yeah. So my work up for Vitiligo really has to do with family history, the personal history of the individual and then the review of systems. So it it it doesn't necessarily have to do with the amount of body surface area involved because if Vitiligo's present, I know there's an autoimmune condition there.

And so I really want to see if there's other autoimmune conditions present. Thyroid conditions tend to be the most common. And so if there's a family history of any thyroid abnormalities or if an individual has a positive review of systems with like fatigue.

You know, hair loss, Constipation. I might go ahead and screen for a TSH and AT4 as well as thyroid antibodies to see if there's any ongoing, if there's any thyroid disorder, and then I'll do a good review of systems to see if there's any.

Kind of inflammatory bowel disease, any maybe anemia, type one diabetes and celiac disease. Do kind of a screening for those to see if any of those based on symptoms require any any work up.



Kamat, Deepak M 59:29

Any other questions, comments for Doctor Gupta?

I don't say any. Dr. Gupta, thank you very much for that wonderful presentation and nice to see you again. Thank you all for attending this morning's grand round. I'm going to conclude. Have a wonderful week. We'll see you next Friday at same time. Thank you.



Gupta, Deepti 59:58

Thank you.



Kamat, Deepak M stopped transcription