Seborrheic Dermatitis

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Objectives

1. Distinguish the two variants of seborrheic dermatitis
2. Recognize the distinguishing features of seborrheic dermatitis and how to differentiate from rashes with similar appearances
3. Identify when to worry about seborrheic dermatitis
4. Consider different treatment options for seborrheic dermatitis

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Case: **Jake**

ID: 2 month-old male

CC: “Greasy flaky dandruff”

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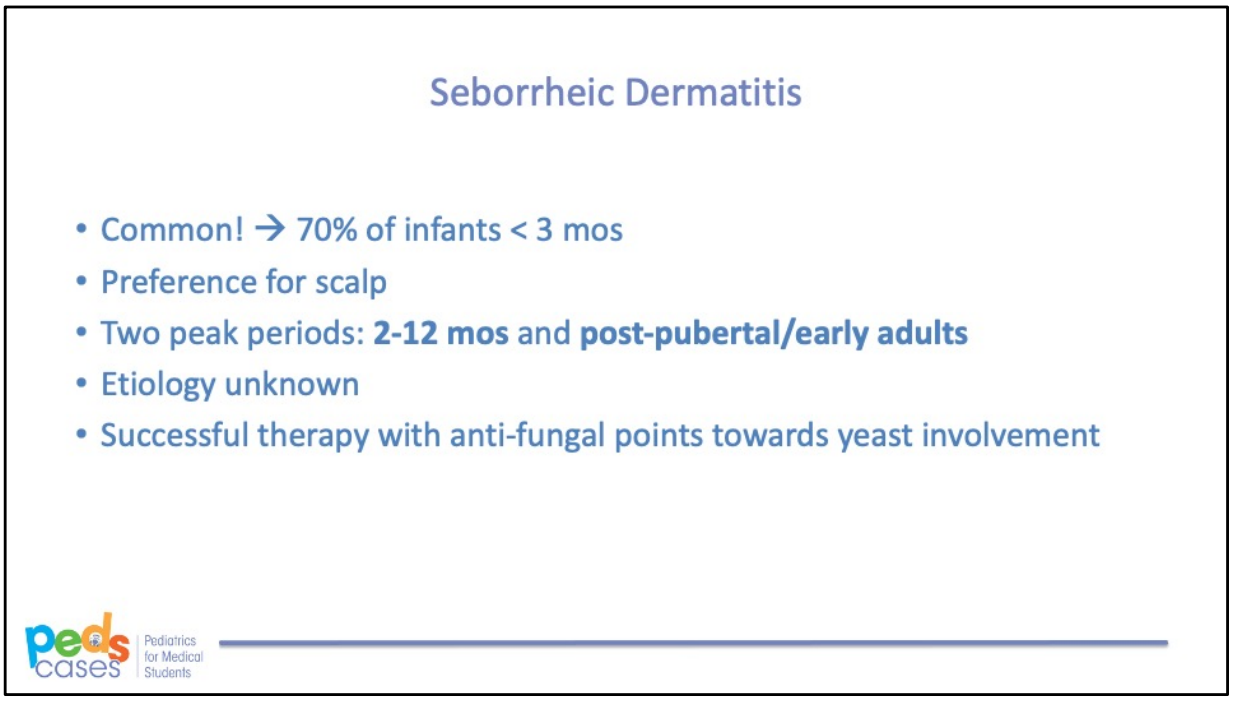
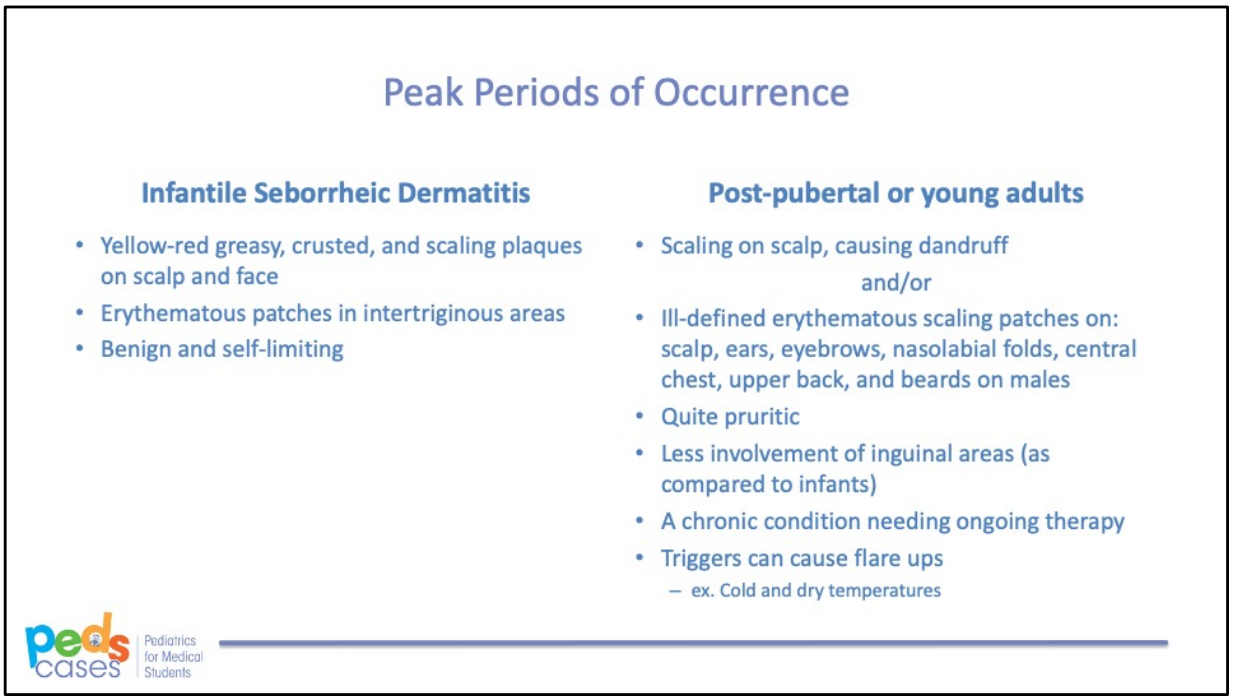
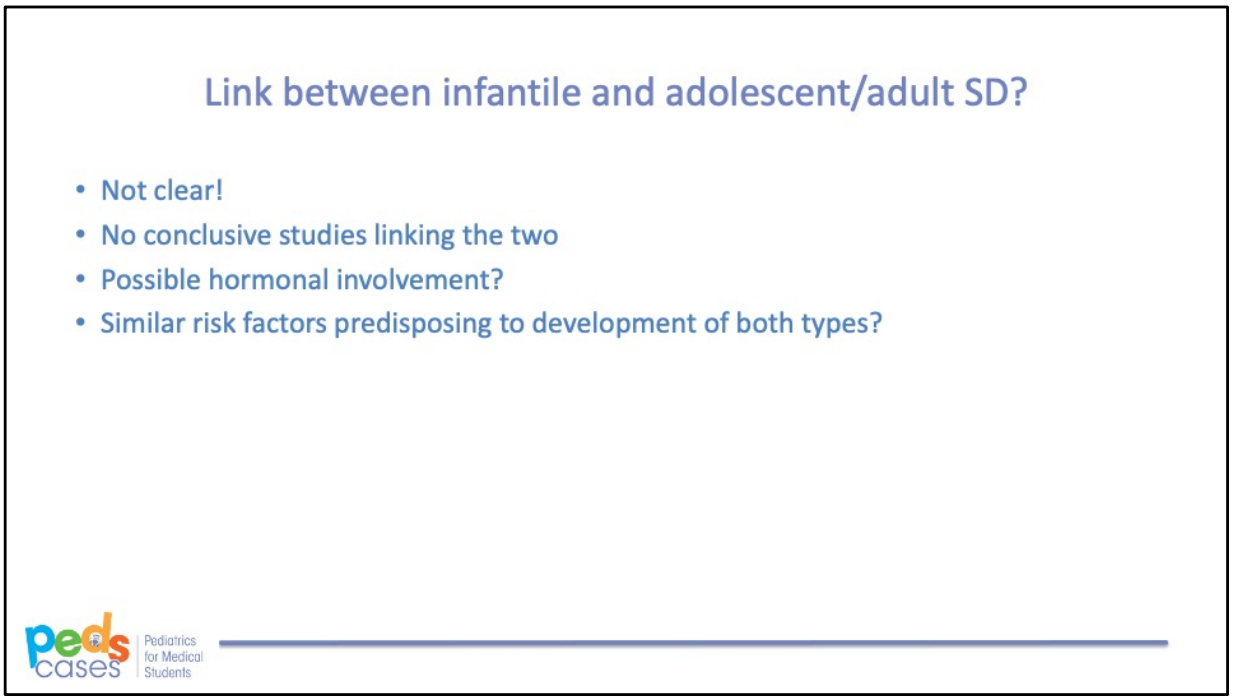


AP: Seb derm is quite common! It occurs in up to 10% of the general population, and up to 70% of infants < 3 mos of age experience SD at least once. In infants, it is commonly known as "cradle cap" due to its preference for appearing on the scalp, but it can also occur in other parts of the body. There is a bimodal distribution of occurrence, with peaks at 2-12 months of age, and then again in post-pubertal adolescents and early adults. The cause is currently unknown but therapies that have been successful in treating it have given us clues that point towards a certain yeast causing a non-specific immune response.



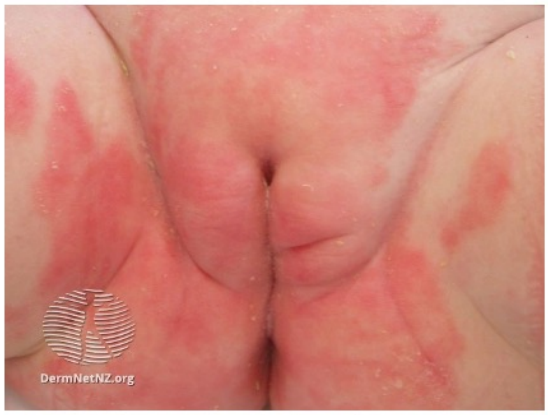
AP: So the first peak of onset occurs from birth to a year of age; we can call this "**Infantile Seborrheic Dermatitis**." It typically presents as yellow-red greasy, crusted, and scaling plaques on the scalp and face. It can also present with shiny erythematous patches in intertriginous areas such as behind the ears, in the diaper area, in the axilla and in the groin. These rashes tend to be benign and self-limiting. The second peak of onset is in post-pubertal adolescents or young adults. The rash presents as scaling of the scalp, causing dandruff, and may also present with ill-defined erythematous scaling patches located on the scalp, ears, eyebrows, nasolabial folds, central chest, upper back, and even beards in males. These rashes can be quite pruritic. In adolescents, they occur less often in the inguinal area as opposed to infants. The unfortunate issue with seb derm in young adults is it becomes a chronic condition that comes and goes and would need ongoing therapy. Triggers such as cold and dry temperatures can cause flare-ups.



Because the cause of seb derm is not exactly clear, it is hard to say whether having had infantile SD predisposes an individual to acquiring it again in adolescence or adulthood. There have been small studies suggesting a possible link between Infantile SD and adult SD, but nothing conclusive has been found. It has been suggested that there is hormonal involvement due to the bimodal occurrence when infants are influenced by maternal hormones, and again with production of androgens in adolescence. It is probable that the two conditions share similar risk factors which may predispose the individual to developing both types over their lifetime.

Differential Diagnoses: **Atopic Dermatitis**

- Spares intertriginous areas and scalp
- Not as much flaking as you would see in SD



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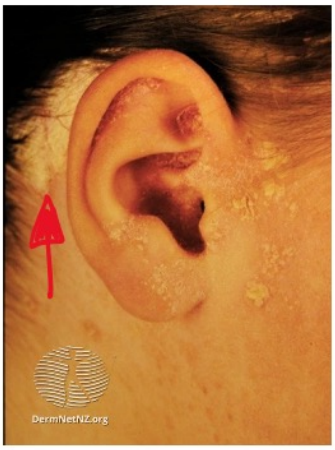
Other skin conditions in infancy that we may mistaken Seborrheic Dermatitis for include:
Atopic dermatitis: if you can remember back to our podcast on diaper dermatitis, atopic dermatitis usually spares intertriginous areas and the scalp. You should not see as much flaking as you do with SD

Picture source:
https://www.dermnetnz.org/assets/Uploads/dermatitis/_resampled/ProtectW10/FitWzY0NSw0ODVd/WatermarkedWyIzNDcyMCJd/napkin-dermatitis03-sm.jpg

Differential Diagnoses: **Psoriasis**

- May be hard to distinguish from SD
- Also appears as plaques with scales
- Scales are quite though and dry as opposed to greasiness of SD



*note the post-auricular scale in picture

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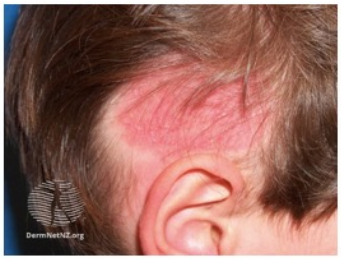
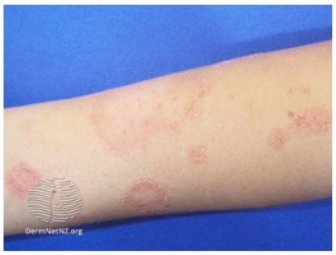
Psoriasis: can be tricky to distinguish from seb derm because it also appears as plaques with scale, but the scales are usually quite thick and dry as opposed to the greasy nature of seb der

Source: https://www.dermnetnz.org/topics/paediatric-psoriasis/

Differential Diagnoses: Tinea Capitis and Tinea Corporis

- Fungal infections of scalp and body
- Scaling, erythematous or non-erythematous patchy alopecia
- Erythematous annular rashes on body





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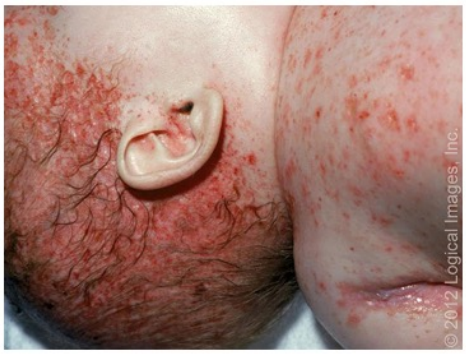
Tinea Capitis & **Tinea Corporis** are fungal infections of the scalp and body, respectively.~~,~~ They can cause scaling, erythematous or non-erythematous patchy alopecia on the scalp and erythematous annular rashes on the body.

Source: https://www.dermnetnz.org/cme/fungal-infections/tinea-capitits/
Source: https://www.dermnetnz.org/topics/tinea-corporis/

Differential Diagnoses: **Langherhans Cell Histiocytosis**

- Life threatening
- Usually involving multiple organs in infants
- Skin involvement: red-brown papules with erosions, crusting, and petechiae
- Inguinal creases, neck folds, post-auricular folds, abdomen, palms, soles
- Lymphadenopathy and hepatosplenomegaly



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Langerhans cell histiocytosis – This is an important one to note. Those who tuned in for our diaper dermatitis podcast will have already heard this. Since I've talked about this once before, Annie, why don't you field this one. Why and when do we worry about LCH?

AP: Luckily for me, I paid attention on our previous podcast! So, LCH is a life-threatening condition that can involve multiple organs. Skin lesions are red-brown papules with erosions, crusting, and petechiae. They appear in inguinal creases, neck folds, post-auricular folds, on the abdomen, palms, and soles. The skin findings that would make you suspicious for LCH would be erosions, purpura, and/or petechiae! As always, do a thorough physical exam because lymphadenopathy and hepatosplenomegaly can point towards LCH. However, we should note that you can also see lymphadenopathy in patients with seb derm.

Source:
https://www.uptodate.com/contents/image?imageKey=DERM%2F68224&topicKey=DERM%2F1734&search=lch&source=outline_link&selectedTitle=5~144

Differential Diagnoses for 15-year-old Jake?

- Major differential → **Psoriasis**
  - Well-demarcated dark-pink and red plaques
  - Nail pitting
- Allergic contact dermatitis
- Pityriasis Rosacea
- Tinea Corporis
- Lupus Erythematosus
- Pemphigus Foliaceous

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JF: Awesome, you did pay attention! So we talked about differential diagnoses for infants and our patient is an infant but how about if Jake was a 15 year old guy presenting with the same rash, what would be more prominent on our differential then?

AP: I would think about more chronic skin conditions, in particular **psoriasis**, which will present with well-demarcated dark-pink and red plaques. We may also see nail pitting as a clue to point us towards psoriasis. Other differential diagnoses I would think about in adolescents include: allergic contact dermatitis, pityriasis rosea, tinea corporis, lupus erythematosus, and pemphigus foliaceous.

History

- Cradle cap appeared shortly after birth
- Non-irritating
- Crusting and greasiness developed
- No bleeding or discharge
- No recent illness
- No fever
- No emesis
- No diarrhea

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Let's start with some background information this rash with Jake.

His mom tells you the rash first started right after he was born, she thought it was just some dead skin that didn't come off easily in the bath- so she left it. It doesn't seem to irritate him that much. She noticed more crusting and greasiness a few days after it's first appearance but no bleeding or discharge. He hasn't been sick recently, hasn't had a fever, and he hasn't been vomiting or had diarrhea.

History

- 36+6, SVD
- Uncomplicated pregnancy
- Slightly jaundiced → phototherapy x 24h
- Growing well
- Tracks on 50th %ile on ht, wt, & hc
- BF q2-3h, 15 mins each breast
- BM q2 days; yellow mustard-looking
- WD 8x/day
- 800 IU vitamin D drops
- No allergies
- Mom, Dad and 3-year old sister, Staci, who is healthy
- Meeting milestones

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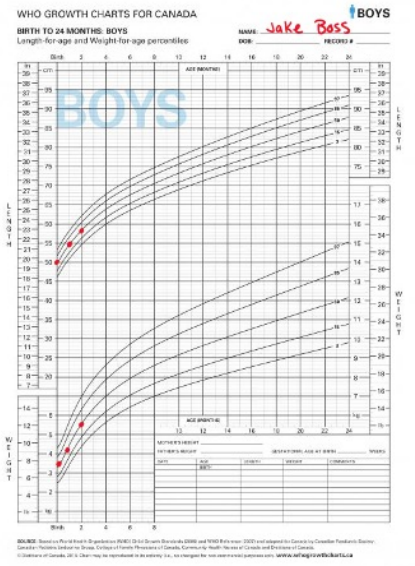
AP: His mother also noted that Jake was born slightly preterm at 36+6 weeks after an uncomplicated pregnancy. He was slightly jaundiced but only needed phototherapy for 24 hours. He went home after 72 hours and has been growing well since. He has been consistently tracking on the 50% percentile for height, weight, and head circumference. He takes breast milk every 2-3 hours and spends about 15 minutes on each side. He has a bowel movement every two days and they are yellow and mustard-looking and he makes about 8 wet diapers a day. They give him two drops of vitamin D a day, and they don't think he has any allergies! He lives at home with his mother, father, and 3 year old sister. Jake has started smiling and the family has been adjusting well at home. His sister had been totally well so his parents are curious what this could be.

Physical Exam: Vitals

- BP: 84/52
- HR: 120
- RR: 42
- O2 Sat 99%
- Temp 36.7˚C

- Growth chart: 50th %ile



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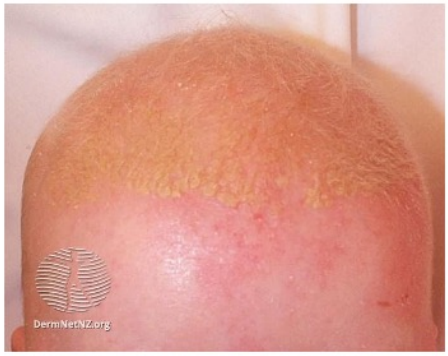
JF: I agree. Let's take a look at him! Tell me what you would look for and why and I'll let you know what we found.
AP: So let's start with vitals and his growth to see if he is as stable as we gathered from the history.
JF: Vitals are stable with a BP of 84/52, HR of 120, RR of 42 with an O2 sat of 99% and a temp of 36.7. His growth chart measurements today trend along the 50th percentile as they have always been.
AP: Ok, great. As with every pediatric exam, I would examine head to toe but for the sake of time, I will focus on the skin examination.
JF: Definitely, let's keep the exam focused. take a look at Jake's rash here on the powerpoint or the script. Let's refresh how to describe lesions with the SCALD mnemonic!

Physical exam: Jake's rash

SCALD:
Size
Color
Arrangement
Lesion morphology
Distribution

+ Secondary changes: crusting, scaling atrophy, lichenification, scarring



5 mm greasy yellow patches with crusting, scaling, and flaking and a distribution across the scalp

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AP: Ok, great. As with every pediatric exam, I would examine head to toe but for the sake of time, I will focus on the skin examination.

JF: Definitely, let's keep the exam focused. take a look at Jake's rash here on the powerpoint or the script. Let's refresh how to describe lesions with the SCALD mnemonic!
AP: Sure! So to describe lesions, recall the mnemonic **SCALDS**:
Size
Color
Arrangement
Lesion morphology
Distribution, and
Secondary changes such as crusting, scaling, atrophy, lichenification, and scarring

I would describe Jake's rash as "5 mm greasy yellow patches with crusting, scaling, and flaking with a distribution across the scalp around the head like a cap, hence the colloquial term "cradle cap'

Physical Exam: Head to Toe

Exam	Findings
Lymph nodes including axilla and inguinal	5 mm soft, mobile, palpably LN in occipital region
Cardiopulmonary	Normal S1/S2, no EHS, no murmurs AE=AE, no adventitious sounds
Abdomen	Normal bowel sounds No masses No organomegaly
Skin	No rashes over rest of the body
Perineum	No rashes, no anal fissures

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JF: Awesome! What other parts of the body should you examine with every well-baby check?
AP: So while we're still on the head and neck examination, I'll check for lymph nodes but will also do so at the axilla and inguinal area. Moving down from the head, I'll listen to his heart and lungs as well as his abdomen for bowel sounds. I will then take a feel of his belly noting any masses or organomegaly. While doing all this, I'd be looking at his skin for any rashes anywhere else, especially in the axilla.
JF: There is a small 5 mm soft and mobile palpable lymph node in the occipital region, but find none elsewhere. Heart sounds are normal. No murmurs appreciated. You hear equal air entry bilaterally with no crackles or wheezes. You hear normal bowel sounds. No masses or organomegaly appreciated. Good thought with the rashes. You don't see any rashes in the axilla, or on the chest and abdomen.
AP: I would then take a look in the diaper region, first politely asking him to please not pee on me! I would examine the perineum and inguinal folds for diaper rashes, and look at the anal opening for any fissures.
JF: Yes, good thought. I've found politeness doesn't really work on these little guys though, they're quite free-spirited when it comes to voiding. So you find nothing concerning on your skin inspection of the perineum. OK, so what do you think? Does Jake have seb derm? If so, how do you want to treat him?

News Flash!

PedsCases Daily

25 AUG 2019

Medical student finally nails the diagnosis!

AP: Hey everyone! Thanks for tuning in to this podcast on Seborrheic dermatitis. My name is Annie Poon, I am a fourth year medical student at the University of Alberta, and I am joined by Dr. Jessica Foulds, so we've condensed it throughout the podcast to "seb derm"! Haha, yes, I mean you resourcefully used the cues around you to come up with that but that history is pretty common in a community pediatric clinical setting so you should definitely be thinking that. Good call on the abbreviation! Let's talk about seb derm for a second here, what is it and what do you know about it? AP: Seb derm is quite common! It occurs in up to 10% of the general population, and up to

faints. The unfortunate issue with seb derm in young adults is it becomes a chronic condition that comes and goes and would need ongoing therapy. Triggers such as cold and dry temperatures can cause flare-ups. Because the cause of seb derm is not exactly clear, it is hard to say whether having had infantile SD predisposes an individual to acquiring it again in adolescence or adulthood. There have been small studies suggesting a possible link between Infantile SD

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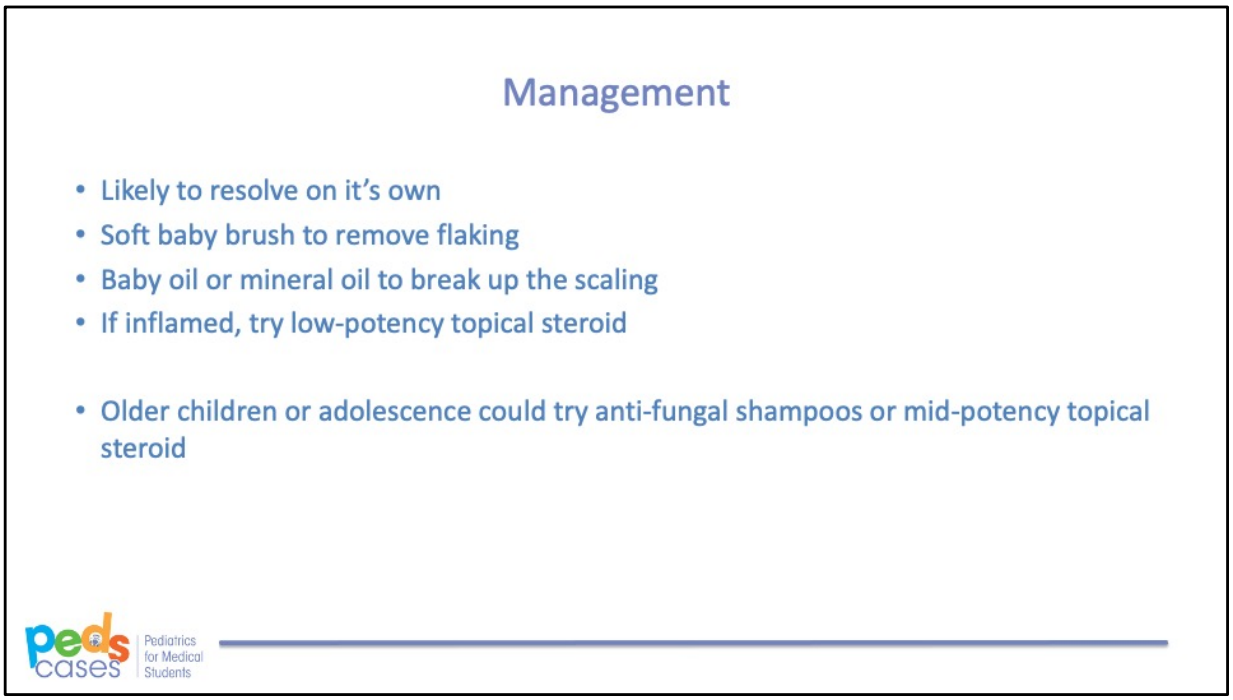
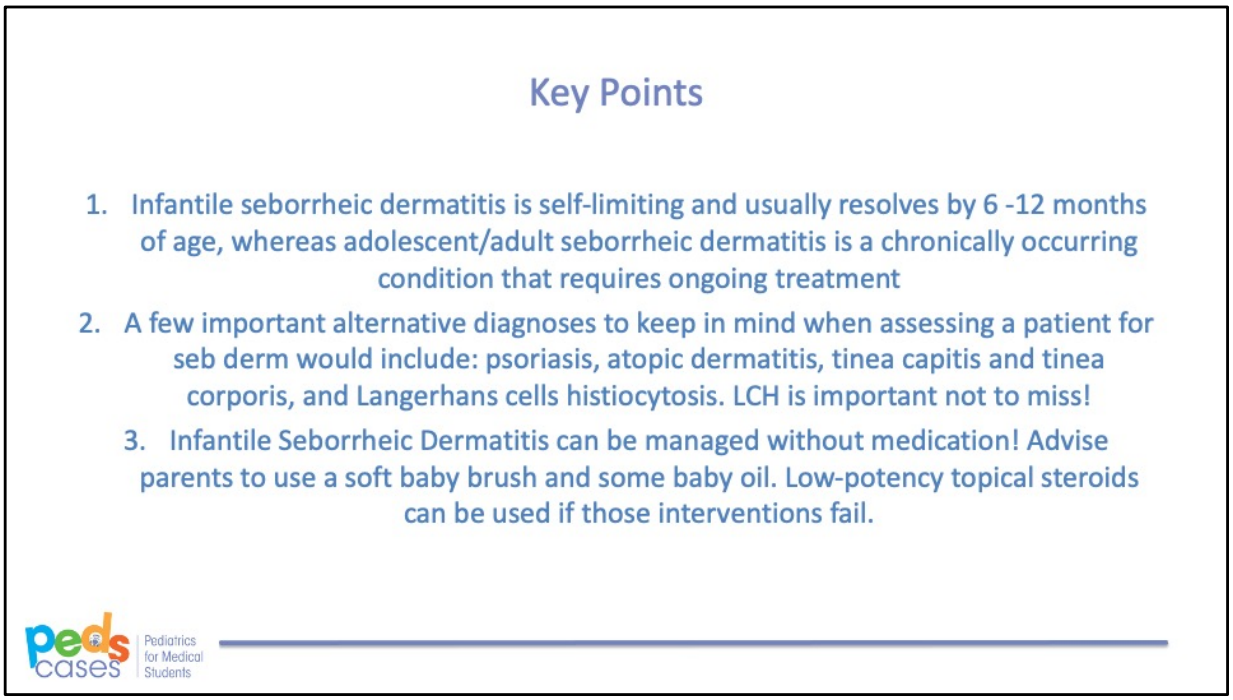
AP: I think he does have seb derm! The rash only appears on his scalp with the classic features of a cradle cap; the rash is nowhere else on the body, and he is an overall healthy boy who doesn't seemed bothered by the rash! He does have that one small lymph node but given its size and location, I would associate it with his seb derm as opposed to something more serious. I would make a note of it and follow-up on it on his next appointment or sooner if his mom is concerned about it.



Given what we know about SD, it is likely to resolve on its own in a few months. However, it is understandable that his parents are concerned about the appearance. We could suggest using a soft bristle baby brush to remove the flaking and apply some baby oil or mineral oil to break up the scaling.

JF: Yes, good thought! If that fails, or the rash looks quite inflamed, I would recommend trying a low-potency topical steroid. If this was an older child or an adolescent, they could try anti-fungal shampoos, or a mid-potency topical steroid.



AP: This brings us to the end of our podcast on Seborrheic dermatitis. Let's go over some learning points of this podcast!

References

We would like to acknowledge the following sources from which we drew the pictures for this PedsCases video. These visual references were used solely for educational purposes.

www.dermnetnz.org
www.uptodate.com

Clark, G.W., Pope, S.M., & Jaboori, K.A. (2015). Diagnosis and Treatment of Seborrheic Dermatitis. Am Fam Physician. 91(3):185-190.

Foulds, Jessica. (2019, February 4). Pediatric Dermatology [PowerPoint presentation].

Gill, P & Lara-Corrales, I. Approach to Pediatric Rashes. PedsCases podcast. 2015.

Mancini, A. J., & Krowchuk, D. P. (Eds.). (2016). Pediatric dermatology: A quick reference guide.

Sasseville, D. (2019). Cradle cap and seborrheic dermatitis in infants. In R. Corona (Ed.), UpToDate. Retrieved July 7, 2019 from: https://www.uptodate.com/contents/cradle-cap-and-seborrheic-dermatitis-in-infants

Sasseville, D. (2018). Seborrheic dermatitis in adolescents and adults. In R. Corona (Ed.), UpToDate. Retrieved July 7, 2019 from: https://www.uptodate.com/contents/seborrheic-dermatitis-in-adolescents-and-adults

Victoire, A., Magin, P., Coughlan, J., & van Driel, M.L. (2014). Interventions for infantile seb derm (including cradle cap). Cochrane Database Of Systematic Reviews, 2014(11), 1-11. Doi: 10.1002/14651858.CD011380.

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Thank you for watching!

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