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## **Scarring Alopecia and Coronavirus**

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### **CARF Webinar Originally Aired on March 19, 2020**

SUMMARIZED BY MORINOLA SHOBAJA, MEDICAL STUDENT, UNIVERSITY OF ILLINOIS AT CHICAGO

This webinar presentation was given by Dr. Maryanne Senna, the Director of Massachusetts General Hospital Hair Loss Clinic and Research Unit and was hosted by Jean Pickford, Executive Director of the Cicatricial Alopecia Research Foundation.

The main topic of the presentation was discussion of the coronavirus in scarring alopecia during the 2020 pandemic. The presentation will address the following:

- What is the Coronavirus?
- Scarring alopecia is an autoimmune disease, so does this put me at higher risk of COVID19?
- How does my cicatricial alopecia treatment affect my risk of getting COVID19?
- Will the stress from COVID19 make my hair loss worse?

### **What is Coronavirus (COVID19)?**

The name is derived from the Latin corona meaning “crown”, itself a borrowing from the Greek word *kopwn*, meaning “garland or wreath”. The name refers to the characteristic appearance of the projections from its surface of the virus that create an image reminiscent of a crown. Coronaviruses are a large family of viruses that cause respiratory illness. They are often transmitted from animals to people (called zoonotic viruses).

If you have had the common cold in the past, chances are you have had a type of coronavirus. However, some coronaviruses can be more severe, such as

- Middle East Respiratory Syndrome (MERS-CoV)
- Severe Acute Respiratory Syndrome (SARS-CoV)
- Coronavirus 2019 (COVID 19) discovered in 2019 and not previously identified in humans.

Although some coronaviruses will cause minor colds, in more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure and even death.

COVID19 Symptoms include fever, sore throat, cough, shortness of breath, muscle aches, persistent chest pain or tightness.

### **Who is Considered High Risk?**

- Age >70
- Severe chronic lung disease (e.g., asthma, bronchiectasis, cystic fibrosis, COPD, etc.)
- Severe chronic medical problems (severe heart disease, poorly controlled diabetes)
- Severely immunocompromised (CD4 count <200)

- On Immunocompromising medications\*

**Reasons Why Coronavirus is NOT like the Flu:**

- According to European public health agencies, 1 in every 1000 people who are infected with influenza die each year in the EU, the UK, Norway, and Iceland.
- The estimated mortality rate for COVID19 is 20 to 30 per 1000 people. Current data from Italy shows a mortality rate even higher, at 3x this estimation.
- Unlike influenza, there was no COVID19 vaccine prior to the outbreak.
- COVID19 also appears to be as transmissible as influenza, if not more so.
- Because this is a novel virus, no one has prior immunity which puts the entire human population susceptible to the virus.

**Scarring alopecia is an autoimmune disease, does this put me at higher risk of COVID19?**

Autoimmune diseases are conditions in which the body’s immune system erroneously attacks normal tissue(s). Some autoimmune diseases are *systemic*, meaning they cause inflammation or damage multiple tissues throughout the body. Examples include Lupus, Rheumatoid Arthritis, and Sarcoidosis.

Some autoimmune diseases are *localized*, meaning that only one part of the body is affected. Examples are Autoimmune Thyroid Disease and scarring alopecia.

According to literature, systemic problems were not associated with scarring alopecia. In fact, scarring alopecia patients had the same risk as the general population of having all conditions including other autoimmune conditions. Studies support that scarring alopecia patients had lower odds of congestive heart failure, stroke, and glaucoma.

**Factors that matter regarding scarring alopecia and COVID19**

<u>General Population</u>	<u>Scarring Alopecia Extra Considerations</u> (Medications that cause systemic immune suppression)
<ul style="list-style-type: none"> <li>• Age</li> <li>• Severe chronic lung disease</li> <li>• Severe chronic medical problems</li> <li>• Severely immunocompromised</li> </ul>	<ul style="list-style-type: none"> <li>• Methotrexate</li> <li>• Cyclosporine</li> <li>• Cellcept</li> <li>• Jak Inhibitors</li> <li>• Intramuscular steroids</li> <li>• Any “biologic” medication such as Humira, infliximab, etc.</li> </ul>

**Will the Stress from COVID19 make my Hair Loss Worse?**

Stress is a normal part of life. Biologically, stress causes a fight or flight response in our bodies, which is a way our body adapts to stressors that arise in our daily life. However, prolonged, and unmanaged stress has negative effects on our health, particularly in people predisposed to inflammatory and autoimmune conditions. To understand how stress might affect scarring alopecia, we first need to discuss something important called immune privilege.

Immune privilege is the natural mechanism of the body that is thought to exist only in certain body sites. Its purpose is to prevent immune attack and damage to vulnerable body sites such as the eyes, brain, ovaries and testes, maternal fetal unit (when pregnant), and hair follicles. Loss of this immune privilege is thought to contribute to a few autoimmune conditions including inflammatory hair disorders. When stress is brought on within the hair follicle → inflammation occurs around the hair follicle. This ultimately causes hair follicle immune privilege to collapse.

What are some ways to reduce stress?

1. Social engagement,
2. Adult coloring books (interestingly enough, this is a good way to relieve stress),
3. Exercise your body and/or mind,

4. Meditation (apps like Calm, Headspace, Painting by Numbers, Mindfulness and Insight Timer are great suggestions),
5. Enjoying your hobbies,
6. Make time for yourself, listen to your mind and body,
7. Try to relax and wind down before bedtime to get adequate rest.

It is extremely important to find ways to reduce your stress. Do not think you need to follow a specific rulebook for stress relief. If you like to read books, do that! If you prefer to take a nice walk and look at nature, do that! It does not always have to include exercising or yoga. Everyone is different, find what works for you and change as needed. Practice self-care, even if it is just for 1 minute a day! You will be surprised at the difference this small effort makes in your overall health.

#### Q&A Session with Dr. Senna

Q - In the past, I have been told that one reason I have LPP is because my immune system is 'too strong' and attacking my hair follicles. Is that a correct statement? If it is, will this protect from COVID19?

A - *Scarring alopecia patients had the same risk as the general population of having all conditions including other autoimmune conditions. Studies support that scarring alopecia patients had lower odds of congestive heart failure, stroke, and glaucoma.*

Q - How do we stop meds if we want to or need to?

A - *Ideally, cyclosporine should be tapered, other medications including Methotrexate JAK inhibitors, Cellcept, and biologics can be stopped cold turkey.*

Q - Do topical treatments impact my risk of COVID19?

A - *No, the penetration to the skin at the scalp or neck into the bloodstream is negligible. Topical treatments reduce inflammation ONLY where they are applied. The same is true for steroid scalp injections.*

Q - What types of vitamins should those with scarring alopecia take to support their immune system during this time?

A - *The data that is known about what is helpful are macronutrients that come from our diet, which are more important than any supplement that one can take. Thus, having a well-balanced diet is vital to the immune system.*

Q - Are we causing more symptoms and hair loss when we need to wear a hair or hair piece, especially out in the sun?

A - *No, wearing a hat, hair piece, or a wig should not increase the scarring alopecia that you experience over time.*

Q - In treating Frontal Fibrosing Alopecia, how long do you give each treatment before you will consider changing?

A - *I never change anything in shorter than 6-month time. Medications do not work quickly and requires consistency.*

Q - What is the update on micro-needling? Anything else promising in the pipeline?

A - *Unfortunately, due to COVID, one of our studies was halted. We are however, hoping in the next year or so that the micro needling will prove to be useful in follicular rescuing and potential new hair follicle regenerating.*

Q - Can scalp transplants (partly or whole) work to replace the areas affected by scarring alopecia? Has that been investigated as an option? Any studies?

A - *The longer the patient has been in remission from the scarring inflammation, the better chance of a transplant being successful. It is not advised with recent flares.*

Q - Any recommendations to resolve an itchy irritated scalp that is not responding to medications prescribed by dermatologist.

A - *Topical steroids tend to have the shortest duration of action that relieves these symptoms while oral medications tend to have longer durations of action. Thus, it is a personal choice on how want to approach your treatment. If your disease is active, it is best to be treated with maintenance therapy (oral anti-inflammatory) to keep symptoms at bay.*

Q - Any medications used for psoriasis skin inflammation helpful for treating scarring alopecia?

A - *Some medications have been shown to be effective for some scarring alopecia but not all exclusively.*

Q - Any new research studies? How can people support those efforts with donations?

A - *Best way to support us is by funding studies and coming to the forefront to create more awareness of scarring alopecia. It must be a patient-grounded effort.*



**CICATRICAL ALOPECIA RESEARCH FOUNDATION (CARF)**

1586 Sumneytown Pike #1322 • Kulpsville, PA 19443

267.613.9811 • [info@carfintl.org](mailto:info@carfintl.org) • [www.carfintl.org](http://www.carfintl.org)