

A brief note on Chronic Actinic Dermatitis (CAD).

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Introduction

Chronic Actinic Dermatitis (CAD), also known as Actinic Reticuloid Syndrome or photosensitive eczema, is a rare and complex skin condition that predominantly affects individuals exposed to sunlight or artificial ultraviolet (UV) radiation. This chronic inflammatory skin disorder is often misdiagnosed or overlooked due to its rarity and resemblance to other skin conditions. In this article, we will delve into the various aspects of CAD, including its causes, symptoms, diagnosis, and available treatment options [1].

Causes of CAD

UV radiation exposure: One of the primary causes of CAD is prolonged and repeated exposure to UV radiation from sunlight or artificial sources such as tanning beds. UV radiation can trigger an abnormal immune response in susceptible individuals, leading to the development of CAD.

Genetic predisposition: While CAD is not solely a hereditary condition, genetics may play a role in predisposing certain individuals to the disorder. People with a family history of CAD may have an increased risk of developing the condition.

Immune system dysfunction: The immune system is thought to play a significant role in the development of CAD. In CAD patients, the immune system may become hypersensitive to UV radiation, leading to chronic inflammation and skin damage.

Environmental factors: Some environmental factors, such as exposure to certain chemicals or allergens, can contribute to the development of CAD in susceptible individuals. These factors may act as triggers, exacerbating the condition [2].

Symptoms of CAD

CAD presents with a wide range of symptoms that can vary in severity from person to person. Common symptoms include:

Skin rash: One of the hallmark symptoms of CAD is a persistent, itchy, and often painful skin rash. The rash typically appears on sun-exposed areas of the body, such as the face, neck, arms, and hands.

Erythema: CAD often causes erythema, or redness of the skin, in the affected areas. The redness may be accompanied by swelling and a burning sensation.

Scaling and peeling: Over time, the skin affected by CAD may become scaly and develop areas of peeling or crusting. This can contribute to further discomfort and cosmetic concerns.

Blistering: In severe cases of CAD, the skin may develop blisters or vesicles, which can be painful and prone to infection if not properly managed.

Thickening of the skin: Prolonged inflammation in CAD can lead to thickening of the skin, a condition known as lichenification. This can cause the skin to become leathery and less flexible.

Pruritus: CAD is often accompanied by intense itching, which can significantly impact a person's quality of life. Scratching the affected areas can worsen the condition and lead to skin damage.

Photosensitivity: Individuals with CAD are highly photosensitive, meaning that even brief exposure to sunlight can trigger or worsen their symptoms. This can make outdoor activities challenging and limit their quality of life.

Nail changes: Some CAD patients may experience nail changes, including ridges, pitting, and discoloration, which can be indicative of the condition [3].

Diagnosis of CAD

Diagnosing CAD can be challenging due to its resemblance to other skin conditions and the rarity of the disorder. A comprehensive evaluation by a dermatologist is essential to reach an accurate diagnosis. The diagnostic process may include the following steps:

Medical history: The dermatologist will take a detailed medical history, including information about the patient's sun exposure, previous skin conditions, family history, and any medications or topical treatments used.

Physical examination: A thorough physical examination will be conducted to assess the extent of the skin involvement and identify characteristic signs of CAD, such as erythema, scaling, and blistering.

Phototesting: Phototesting involves exposing a small area of the patient's skin to controlled amounts of UV radiation to assess their photosensitivity. CAD patients typically exhibit an exaggerated response to UV exposure during phototesting.

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Biopsy: A skin biopsy may be performed to confirm the diagnosis. A small sample of affected skin is taken and examined under a microscope to look for specific changes consistent with CAD.

Patch testing: Patch testing may be conducted to identify potential allergens or triggers that could exacerbate CAD symptoms. This helps in developing a personalized treatment plan.

Blood tests: Blood tests may be ordered to rule out other conditions that can mimic CAD, such as lupus or other autoimmune diseases [4].

Treatment options for CAD

The management of CAD involves a multifaceted approach that aims to alleviate symptoms, reduce inflammation, and minimize exposure to UV radiation. Treatment options may include:

Sun protection: The cornerstone of CAD management is sun protection. Patients are advised to minimize sun exposure, wear protective clothing (including wide-brimmed hats and long sleeves), and use broad-spectrum sunscreen with high SPF.

Topical steroids: Topical corticosteroids are often prescribed to reduce inflammation and relieve itching. These should be used under the guidance of a healthcare professional.

Topical calcineurin inhibitors: Calcineurin inhibitors like tacrolimus and pimecrolimus may be used as alternatives to steroids, especially in sensitive areas like the face and neck.

Phototherapy: Controlled phototherapy sessions may be recommended to desensitize the skin to UV radiation. Narrowband UVB therapy and UVA1 phototherapy are common options.

Systemic medications: In severe cases of CAD that do not respond to topical treatments, systemic medications such as oral corticosteroids, immunosuppressant, or biologics may be prescribed. These medications carry potential side effects and require close monitoring.

Immune modulators: Immune modulators like azathioprine, methotrexate, or mycophenolate mofetil may be used to suppress the abnormal immune response in CAD patients.

Antihistamines: Antihistamines can help relieve itching and improve overall comfort.

Emollients: Regular use of emollients or moisturizers can help soothe dry and irritated skin [5].

Conclusion

Chronic Actinic Dermatitis is a challenging and often misunderstood skin condition that can significantly affect the lives of those who suffer from it. Although it is a rare disorder, timely diagnosis and appropriate management are essential for improving the quality of life for affected individuals. A multidisciplinary approach involving dermatologists, allergists, and immunologists is often necessary to provide comprehensive care. With the right treatment plan and diligent sun protection, many CAD patients can find relief from their symptoms and lead fulfilling lives despite the challenges posed by this condition.

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