

Micronutrient Containing Multipurpose Cleansing Lotion Ends Ten Year Search for Relief from Severe Pruritus

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INTRODUCTION

This is the case of severe, refractory, chronic pruritus of 10 years duration. The subject is at onset of pruritic symptoms, a 58 yr old, female. She was a generally healthy active, non-smoker with recurrent allergic rhinitis related to contact with dog dander, trees and grasses. A sudden onset of severe generalized itching and prickling without skin lesions, scratching produced welts and increased the intensity (dermographism). Picture #1

CLINICAL CASE

Dermographism is a common form of chronic hives. It is also known as “skin writing”. It occurs in about 5% of the population. People with dermographism experience a linear, itchy hive within minutes of stroking the skin with an object. This is in contrast to the linear reddening that does not itch seen in healthy people who are scratched. The hives appear within minutes and resolve within hours. The tendency to be “dermographic” lasts for weeks to years. In most cases the cause is unknown. Picture #2

Symptoms worsened at night, leading to insomnia. Contact with water (aquagenic) caused itching so intense that she found bathing to be torture. Aquagenic pruritus is characterized by intense itching and other skin sensations, such as burning, lasting for 30 minutes to 2 hours, after contact with water. The etiology is generally unknown, although it is sometimes seen accompanying polycythemia vera; in other cases it may be familial. Under the guidance of her dermatologist, she tried multiple systemic anti-histamines and sedatives including Cetirizine. Cetirizine is indicated for the treatment of the uncomplicated skin manifestations; it significantly reduces the occurrence, severity, and duration of hives and significantly reduces pruritus. She bathed infrequently, trying oatmeal baths, hypoallergenic creams and lotions, topical steroids and anti-histamines to no avail. Traditional treatments for neurogenic pruritus have included systemic medications that can cause sedation, nausea, dizziness and other limiting side effects.

After ten years of suffering through failed therapies, she turned to a wound and skin care specialist. A review of her medical history from onset of pruritus highlighted several known causes for severe pruritus. One year after onset she was diagnosed with breast cancer and polycythemia vera. Due to the inability to tolerate bathing or showering it was recommended that she try a micronutrient containing multipurpose cleansing lotion * and micronutrient containing moisture barrier **. The active ingredients in the cleansing lotion and protective cream were dimethicone (1.5%) and Olivamine®, a combination of amino acids, antioxidants, vitamins, and MSM. The products also contain natural oils and organic aloe.

DISCUSSION

The biochemical reasons why pruritus occurs include the role of mast cells and histamine, prostaglandins and leucotriene.¹⁰

Mast Cells and histamine

Immunity associated mast cells², present in skin, release granules (a process accurately called degranulation) which in turn contain potent chemicals called histamines³. Histamine, through a biochemical process, causes the sensation of itchiness near the skin surface, at the dermal-epidermal junction⁴. This release of granules happens when there is an insult to skin, such as infection, inflammation, insect bite, sunburn, or as in the described clinical case, the source of the itchiness may be hard to identify. A good therapeutic product for itchiness must somehow reduce the level of histamine. This can be done by preventing degranulation directly through beneficial chemicals, or indirectly by reducing the activity of harmful chemicals that encourage degranulation.

Prostaglandins

Infected and inflamed skin have excessive levels of a sometimes useful chemical called prostaglandin E-2 that makes mast cells release their granules and histamine too easily. Therefore infected or inflamed skin tends to itch more.

Leucotriene

Infected and inflamed skin also have excessive levels of harmful chemicals called leucotrienes, which promote three effects; inflammation, degranulation of mast cells, and the imparting of a higher degree of sensitivity⁵.

In short, the harmful chemicals encourage the mast cells to degranulate and this starts the “itching” cascade leading to further inflammation, and even more degranulation leading to destruction of skin when pruritus or itching is uncontrolled.

The components of Olivamine based products may be responsible for these benefits.

Hydroxytyrosol (olive seed extract), through its anti-oxidant and free radical elimination activity reduces inflammation (oxidation = inflammation, in general terms) and reduces the formation of the harmful chemicals, such as leucotrienes.

Aloe barbadensis leaf juice contains alprogen⁶, which prevents mast cells from releasing their granules, and to the extent granules are still lost and histamine is released, alprogen inhibits the action of histamine. It also prevents the synthesis of leucotrienes.

Vitamin B3 and B6 prevents releasing of mast cell granules. The release of these granules start the “itching” cascade, therefore anything that prevents their release, helps to reduce itching. Vitamin B3 also reduces the sensitivity of the nerve fibers, reducing itchiness.

Vitamin A leads to reduction of inflammation⁷, and the release of histamines, prostaglandins, and leucotrienes.

Silicones prevent excessive drying of skin through their controlled barrier properties. Excessive skin dryness leads to inflammation and the creation of harmful chemicals causing degranulation of mast cells and the itching cascade. Studies have shown that silicones have significant clinical benefits in the retaining of moisture barrier properties of skin.^{8,9}

Itchiness, or pruritus, a biochemical process, in which the worst chemical of all is histamine, found at the end of the itching cascade. Histamine levels can be well controlled directly by controlling mast cell degranulation, and indirectly by controlling chemicals that in turn control mast cell degranulation. The components of the Olivamine® containing product are known in literature to be beneficial at controlling, both directly and indirectly, the release of histamine. In doing so, Olivamine® halts itching and allows skin to heal. It pulls skin out of the vicious cycle that uncontrolled itching causes, and gets the skin into a virtuous cycle of relief from itchiness and healing.

CONCLUSION

The patient started using the cleansing lotion and then added the moisture barrier two weeks later. She kept a journal to document the results. Within seven days of using the cleansing lotion she was able to tolerate bathing without itching for the first time in ten years. The patient reported a dramatic decrease in itching and the visible manifestations of her disease were much less noticeable. The Olivamine based products provided effective relief without the side effects associated with many traditional treatments including medications. Olivamine products are cost effective and clinically efficient.



Picture 1.

Typical presentation of a patient with Dermographism. Photo courtesy of <http://DermAtlas.med.jhmi.edu/derm/>



Picture 2.

A patient with Dermographism. Photo courtesy of <http://DermAtlas.med.jhmi.edu/derm/>

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PRODUCT NOTATION

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