

Case Report



Efficacy of a 10% Magnesium Chloride Ointment for Seborrheic and Atopic Dermatitis: A Case Report

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Abstract

After showing the potential involvement of magnesium chloride to stabilize tissue mast cells involved in the etiology of seborrheic dermatitis, the case of a patient with atopic hand dermatitis confirms the efficacy of a 10% magnesium chloride ointment. This observation is confirmed by a recent Japanese study showing the effectiveness of magnesium chloride and zinc chloride solutions in stabilizing rat peritoneal mast cells. Thus, in vitro research confirms the in vivo clinical observations. The local treatment of seborrheic and atopic dermatitis should therefore be redirected towards a more effective strategy without potential side effects, thus marking a great progress in dermatology.

Keywords: *magnesium chloride, mast cells, ointment, seborrheic dermatitis, atopic dermatitis*

Introduction

A previous research showed that tissue mast cells at the base of sebaceous glands are potentially involved for the etiology of facial seborrheic dermatitis and that magnesium chloride was probably the key factor of this skin reaction [1]. A sodium cromoglycate ointment showed real effectiveness and potential involvement of the tissue mast cells for seborrheic dermatitis in 1980 [2]. Between 2010 and 2024, the use of a soap and an ointment containing Dead sea salts with about 30% magnesium chloride showed efficacy for a lot of patients afflicted with seborrheic and atopic dermatitis, additionally for psoriasis [3]. In 2024, a 10% magnesium chloride ointment was available as a cosmetic (Casida® magnesium creme lotion). This ointment appears as an alternative to the soap and ointment containing Dead Sea salts and no more available on the cosmetic market. This ointment showed efficacy rapidly after 3 or 4 days for a lot of patients as recorded on my YouTube channel [4].

Case presentation

In July 2025, a patient of my knowledge afflicted with a hand atopic dermatitis showed regularly a reappearance of her hand dermatitis despite the use of corticosteroid ointments for 5 years. The use of 10% magnesium chloride ointment Casida® resolved in 5-6 days the hand atopic dermatitis confirming a lot of other positive observations for seborrheic dermatitis.

The discontinuation of the applications caused the reappearance of atopic hand dermatitis and the new applications blocked the dermatitis again in a few days.

Stabilization of rat peritoneal mast cells with magnesium chloride

In a recent study both magnesium chloride and zinc chloride reduced the number of degranulating mast cells in a dose-dependent manner

[5]. Magnesium chloride significantly decreased the number of degranulating mast cells at concentrations of 50 mM or higher, whereas zinc chloride achieved similar effects at much lower concentrations of 25 μ M or more. These levels of magnesium chloride or zinc chloride enhanced the inhibitory effects of 1 mM adrenaline on mast cell degranulation. Additionally, pharmacological inhibition of the transient receptor potential cation channel subfamily M member 7 (TRPM7) by NS8593 reduced the number of degranulating mast cells in a dose-dependent manner.

Conclusions

Recently, a systematic review showed the evidence for nicotine as a cutaneous hapten in inflammatory dermatoses such as contact, seborrheic and atopic dermatitis [6]. The release of allergy mediators from tissue mast cells and their stabilization therefore appears to be a key factor in reorienting the appropriate strategy for treating the skin diseases mentioned above.

The stabilization of rat peritoneal mast cells in vitro therefore confirms the clinical observations with a 10% magnesium chloride ointment in vivo, thus allowing us to glimpse new perspectives for the treatment of contact, seborrheic and atopic dermatitis as well as probably for the psoriasis.

Declarations

Ethics approval and consent to participate

Not applicable in this section.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this paper.

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None

Authors' contributions

The author read and approved the final manuscript.

References

- [1] Sudan, B. J. L. (2024). Mast Cells, Magnesium Chloride and Seborrheic Dermatitis as an Allergic Skin Disease. *International Journal of Innovative Research in Medical Science*, 9(09), 511–516. <https://doi.org/10.23958/ijirms/vol09-i09/1960>
- [2] Sudan, B.J.L., Sterboul J. (1980). Dermite séborrhéique et cromoglycate de sodium [Seborrheic dermatitis and sodium cromoglycate], *Cutis (Paris)*, 4, 81-85. https://www.researchgate.net/publication/378157111_Dermite_seborrheique_et_cromoglycate_de_sodium
- [3] Sudan, Bernard (2021). Magnesium of Dead Sea salts as a new approach for the treatment of seborrheic dermatitis. Available online: <https://bernardsudan.net/dead-sea-salts-as-a-new-approach-for-the-treatment-of-seborrheic-dermatitis/> (22/07/2021)
- [4] Sudan, Bernard (2025). YouTube channel Available online: <https://www.youtube.com/@bernardsudan4026>
- [5] Kazama, Itsuro & Sonobe, Hiroyuki & Shida, Junko. (2025). Magnesium and Zinc Dose-Dependently Stabilize

Rat Peritoneal Mast Cells and Enhance the Effects of Adrenaline. *Cellular Physiology and Biochemistry*. 59. 465-477. <https://doi.org/10.33594/000000793>

- [6] Sudan, B.J.L. (2025) Nicotine Hypersensitivity in Inflammatory Dermatoses: A Systematic Review of Evidence for Nicotine as a Cutaneous Hapten. *Bioscientia Medicina: Journal of Biomedicine and Translational Research*, 9(7), 7941-7953. <https://doi.org/10.37275/bsm.v9i7.1325>



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