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**Effects of a topically applied wound ointment on epidermal wound healing studied by in vivo fluorescence laser scanning microscopy analysis.**

*González S, González E, White WM, Rajadhyaksha M, Anderson RR.; J Am Acad Dermatol. 1999 May;40(5 Pt 1):708-13.*

### ABSTRACT

**BACKGROUND:** Allergic contact dermatitis (ACD) is a common and often challenging clinical problem. In vivo near-infrared confocal reflectance microscopy (CM) is a new vital microscopy technique.

**OBJECTIVE:** CM was used to evaluate acute ACD.

**METHODS:** Patch testing by means of Finn Chambers technique was performed in 5 subjects to induce an acute allergic skin reaction. Noninvasive CM images from normal and eczematous skin were sequentially recorded before and after removal of the Finn Chambers.

**RESULTS:** The epidermis and papillary dermis were clearly seen in high resolution. Retention of nuclei in stratum corneum, epidermal edema with microvesicle formation, and transepidermal migration of inflammatory cells were observed in vivo. Isolated dendritic cells were present in the ACD sites of 2 subjects, with morphology, size, and location consistent with Langerhans cells. Dermal vasodilation was observed as well.

**CONCLUSION:** CM is a useful tool to study ACD and may be able to track Langerhans cell activation.