PSORIASIS

THE LYMPHOCYTIC RECEPTOR CD6: GENETIC, EXPERIMENTAL AND IN VITRO EVIDENCE OF IT'S RELEVANT ROLE IN PSORIASIS

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Introduction: The lymphocytic receptor CD6 is a type I glycoprotein belonging to the scavenger receptor cysteine-rich superfamily expressed on T cells and intimately associated to TCR/CD3. CD6 is involved in the lymphocytic selection and maturation process in the thymus and in the modulation of immunologic response mediated by TCR/CD3. Recently, CD6 has also been related to different autoinmune diseases as Alzheimer disease, rheumatoid arthritis and psoriasis.

Objective: To provide genetic, experimental and in vitro evidences of the role of CD6 in psoriasis pathogenesis.

Material and Methods: 304 psoriasis patients and 305 healthy controls were included in a multicentric association genetic study. For the experimental study, a murine model of psoriasis induced by imiquimod on CD6+/+ and CD6-/- was used. For the in vitro study, CD4+ cell from CD6+/+ and CD6-/- mice were isolated and cultured under optimal conditions for Th1 and Th17 polarization.

Results: In the genetic study, a statistically significant association was observed between 3 SNPs of CD6 and a greater severity of the disease. In the experimental model, an attenuated form of psoriasis was observed with lower epidermal acanthosis and lower production of IL-17A and IL-22 mRNA. In vitro, a greater Th1 and Th17 polarization was demonstrated in CD4 + T cells from CD6+/+ mice compared with the observed in CD4+ T cells from CD6-/- mice.

Discussion: These results provide new genetic, experimental and in vitro evidences of the relevant role of CD6 in psoriasis.