Synopsis of Original Research Paper

Role of platelets in cutaneous inflammation and tissue remodeling: therapeutic approach for allergic skin diseases via blocking platelet activity

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Accumulated evidences have suggested that platelets play versatile roles in variety of inflammatory reactions, but involvement of platelets in the homeostasis of dendritic cell re-distribution in cutaneous tissue after inflammation. Bone marrow-derived dendritic cells were conjugated with fluorescent and injected intravenously after 6 hours from elicitation of contact dermatitis in mice, with or without platelet depletion. The number of dendritic cells re-distributed in the cutaneous tissue was significantly reduced in pltelet-depleted mice, which was recovered by intravenous restoration of platelet. However, intravenous restoration of platelet from P-selectin-deficient mice did not show this effect. These results suggest that platelets play important roles in re-distribution of dendritic cells after cutaneous inflammation and homeostasis.