URTICARIA, ANGIOEDEMA

BEHAVIOR OF PERIPHERAL BASOPHILS IN AN URTICARIA PATIENT TREATED WITH OMALIZUMAB.

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Background: Omalizumab, a monoclonal anti-IgE antibody, was approved to treat chronic spontaneous urticaria (CSU). We herein show a case that omalizumab was effective for refractory CSU. A 67 year-old male patient had a resistant CSU to antihistamines for 4 years and cyclosporin for 8 months. He started omalizumab at 300 mg and the curative effect appeared after only one dose. He experienced 4 administrations once every four weeks, and then stopped the treatment. After 10 weeks from the last treatment, wheals appeared on his body, then the treatment was restarted. We analyzed the peripheral basophils and the expressions of high affinity IgE receptor and CD203c on basophil population by flow cytometry.

Observation: CRA1 and CRA2 were used for evaluation of high affinity IgE receptor expression; CRA1 shows total receptor expression while CRA2 displays unbound receptor. After treatment, the expression of CRA1 was decreased and the expression of CRA2 was increased, suggesting that omalizumab sufficiently blocks IgE binding to its receptor. The expression of CD203c, an activation maker for basophils, did not show any change. Basophil count was low at 0/μl before treatment for at least 1 year. One week after the first dose of omalizumab, a fully relief of symptom was achieved and basophils number increased gradually. When omalizumab was stopped, wheals appeared again and basophils count turned back to 0/μl. As starting the treatment, basophils count once increased and the patient had no symptom. These observations suggest that basophils count may be a good marker indicating for the condition of CSU. The underlying mechanism may be explained by the recruitement of peripheral basophils into the tissue during active phase of CSU.

Key message: The decreased number of basophils may be a good marker indicating for a relapse of CSU.