Aberrant cytokine expression in serum of patients with adenoid cystic carcinoma and squamous cell carcinoma of the head and neck.

BACKGROUND: Squamous cell carcinoma (SCC) and adenoid cystic carcinoma (ACC) represent 2 clinically important subtypes of head and neck cancer. Our objective was to characterize and compare cytokine profiles in the systemic circulation of patients with SCC and ACC.

METHODS: Multiplex analysis of 10 different cytokines (interleukin [IL]-1beta, IL-2, IL-4, IL-5, IL-6, IL-8, IL-10, granulocyte-macrophage colony-stimulating factor [GM-CSF], interferon [IFN]-gamma, and tumor necrosis factor [TNF]-alpha) in the serum of patients with SCC (n = 20) and ACC (n = 20) and healthy controls (n = 20) was performed using the Luminex fluorescent-bead technology.

RESULTS: Patients with SCC as well as patients with ACC showed an altered cytokine profile compared with healthy individuals. In patients with SCC, significantly elevated serum levels of the proinflammatory cytokines, IL-6 and IL-8, were observed. In patients with ACC, IL-8 serum levels were significantly elevated, and IL-6 serum levels were only increased in a subset of patients.

CONCLUSIONS: A similar serum cytokine profile, with the predominance of proinflammatory cytokines, was observed in patients with SCC and ACC. The newly defined cytokine profile in ACC patients may form the basis for future investigations to explore the role of...
cytokines in ACC tumor progression and their potential value as predictive biomarkers.

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