Serum Levels of Soluble CD14 in Scleroderma

Sir,

The course of the immunological dysregulations in systemic sclerosis (SSc) is still unknown. Our group has documented that miners exposed to silica dust over decades can develop scleroderma indistinguishable from the idiopathic disease (1, 2). Furthermore, we were able to show that monocytes after incubation with silica crystals release fibrogenic cytokines like IL-6 (3). In the inflammatory stage of SSc, monocytes are found in the perivascular infiltrates of the dermis. CD14 is a marker of these cells and shed into circulation after activation (4). Soluble CD14 (sCD14) in serum has been used as a marker of monocyte activation in atopic dermatitis and psoriasis (5, 6). In view of these data, we were interested in knowing whether a general and widespread activation of monocytes/macrophages in SSc patients could be detected using the sCD14 ELISA.

We measured the serum level of soluble CD14 using an ELISA from Immuno Biological Laboratories (IBL), Hamburg, Germany, with a normal range: <3.5–250 ng/ml. The concentration was measured in 20 sera of scleroderma patients with the following characteristics: 15 female, 5 male. Skin involvement limited to the hands and face: 5 patients; sclerosis ascending the limbs: 12 patients; generalised involvement of the skin including the trunk: 3 patients. In 3 patients the joints were affected. Involvement of internal organs was: oesophagus: 12 patients; lung: 9 patients; kidney: 0 patients. Disease activity was classified as either "active SSc" ($n=11$) or "inactive SSc" ($n=9$) according to the following criteria: active SSc: elevation of C reactive protein, ESR and/or immune complexes, leukocytosis, ANF titre $>1{,}024$, clinical skin aspect of inflammation: oedema, redness and tenderness, inactive SSc: ANA titre <512, indurated but not oedematous or atrophic skin, ESR and C reactive protein in the normal range.

Serum levels of sCD14 were in the normal range in SSc patients. Only 1 SSc patient showed a slightly raised sCD14 value of 4.21 ng/ml. No correlation with clinical findings was observed.

Even if there is an activation of macrophages in the tissue microenvironments, this does not seem to result in elevated serum levels.

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