Clonal T Cells May Play Key Role in Scleroderma

BY BRUCE JANCIN

BERLIN — Clonal T cell populations may play a key role in the pathogenesis of systemic sclerosis.

Expanded populations of clonal T cells were detected by high-resolution capillary electrophoresis and polymerase chain reaction in the peripheral blood of 61% of 126 patients with systemic sclerosis, Dr. Alexander Kreuter reported at the annual congress of the European Academy of Dermatology and Venereology.

Expanded clonal T cells were particularly common in the setting of limited cutaneous systemic sclerosis: They were detected using high-resolution capillary electrophoresis and polymerase chain reaction testing in 48 of 65 (74%) of affected patients, in contrast to 29 of 61 patients (48%) with diffuse cutaneous systemic sclerosis, said Dr. Kreuter, a dermatologist at Ruhr University in Bochum, Germany.

The likelihood that these circulating clonal T-cell populations are involved in the pathogenesis of systemic sclerosis is enhanced by the finding that a clonal T-cell population was detected in the peripheral circulation of only 4 of 29 (14%) of healthy controls, he added. Twenty of 44 systemic sclerosis patients (46%) had clonal T-cell populations in lesional skin specimens. The presence of lesional clonal T cells was unrelated to the presence or absence of circulating clonal T cells.

The presence of clonal T-cell populations in the peripheral circulation was unrelated to sex, disease duration, extent of skin involvement, digital ulcers, organ involvement, autoantibody profile, or the form of treatment employed. ■

Disclosures: *Dr. Kreuter reported no financial conflicts.*

Bosentan Found To Reduce Skin Thickening

BERLIN — Bosentan appears to be effective for reduction of skin fibrosis in patients with systemic sclerosis.

Ten patients with systemic sclerosis showed a significant decrease in the skin-thickening characteristic of the disease in response to treatment with bosentan (Tracleer) in a prospective open-label study, Dr. Annegret Kuhn reported at the annual congress of the European Academy of Dermatology and Venereology.

All 10 patients showed significant improvement, with a mean 6.4-point reduction in the Rodnan Skin Score at 24 weeks, which was the primary study end point, according to Dr. Kuhn of the University of Müenster (Germany).

Patients with diffuse systemic sclerosis had a mean 7.8-point reduction, while those with limited systemic sclerosis averaged a 6.3-point improvement in Rodnan Skin Score.

Participants in this small uncontrolled trial also experienced significant healing of digital ulcers, with reduction in size and, in some cases, outright healing. In contrast, Dr. Kuhn noted, the 122-patient double-blind Randomized Placebo-Controlled Study on Prevention of Ischemic Digital Ulcers in Scleroderma (RAPIDS-1) showed that the number of new digital ulcers was reduced by half with bosentan, compared with placebo, but that healing of existing ulcers wasn't expedited (Arthritis Rheum. 2004;50:3985-93).

In the current study, favorable trends on the Scleroderma Health Assessment Questionnaire and the UK SSc Functional Score were documented over the course of 24 weeks but didn't achieve statistical significance. There were no consistent changes over time in terms of 20-MHz ultrasound or hand functioning as assessed by the fist closure test.

Bosentan was dosed at 62.5 mg twice daily for the first 4 weeks, then 125 mg twice daily. The dual endothelin receptor antagonist is approved for treatment of pulmonary arterial hypertension. The European Medicines Agency has granted bosentan orphan drug status for the treatment of patients with systemic sclerosis.

—Bruce Jancin

Disclosures: *Dr. Kuhn's study was funded by Actelion, the manufacturer of bosentan.*