# Eliminated the Need for Biopsy

**Arteritis** *from page 1*

in all patients, who ranged in age from 46 to 89 years.

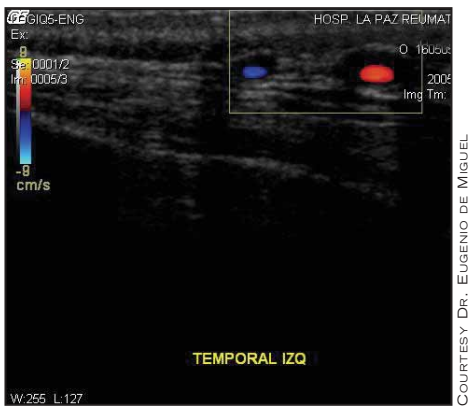
Positive findings included the presence of a dark halo surrounding the arterial flow, and stenoses, or occlusion of the arteries, Dr. Garcia Manrique said in a poster session at the meeting, which was sponsored by the European League Against Rheumatism.

In 18 (47.4%) of the patients, three or more ACR criteria were present (see box). Among these patients who met the clinical criteria, 14 (77.8%) had positive findings on ultrasonography and 4 (22.2%) had negative findings.

On clinical follow-up, the four patients with negative results were determined to not have the disease, he reported. Thus use of ultrasound to evaluate patients wrongly suspected to have temporal arteritis spares them from having to undergo unnecessary biopsy.

Among the 20 patients who did not meet the full ACR criteria for temporal arteritis, ultrasonographic findings also were negative in 16 (80%) of the patients, while the remaining four (20%) tested positive.

Three of the four patients who tested positive on ultrasound were treated with steroids, and the diagnosis was subsequently determined to be temporal arteritis. In only one patient was the diagnosis incorrect.




COURTESY DR. EUGENIO DE MIGUEL

**Color Doppler ultrasound shows a typical sonographic hypoechoic halo in a transverse view of the temporal artery.**

Therefore, ultrasonography in combination with clinical criteria had a sensitivity of 77.7%, a specificity of 80%, a positive predictive value of 80%, and a negative predictive value of 80%, according to Dr. Garcia Manrique.

Biopsy of the temporal artery was done in 24 patients. The results were positive in only six (25%), all of whom also had ACR criteria and positive ultrasound findings. Of the 18 patients whose biopsies were negative, 8 met the ACR criteria and 9 had positive ultrasound findings.

With histology, therefore, ultrasonography had a sensitivity of 100%, a specificity of 50%, a positive predictive value of 40%, and a negative predictive value of 100%.

None of the 20 patients who had negative results on ultrasound had positive biopsy findings or evolved clinically to definitive disease.

This study suggests that the diagnosis can be considered probable in patients who meet the ACR criteria and have positive ultrasound findings, and that negative ultrasound findings in patients not meeting the clinical criteria make the diagnosis unlikely, said Dr. Garcia Manrique.

## ACR Diagnostic Criteria for Temporal Arteritis

Three of the following are required to meet the ACR criteria for temporal arteritis:

- Aged 50 or older.
- New-onset localized headache.
- Temporal artery tenderness or decreased temporal artery pulse.
- Erythrocyte sedimentation rate of 50 mm/h or more.
- Abnormal biopsy specimen characterized by mononuclear infiltration or granulomatous inflammation.

Source: Arthritis Rheum. 1990;33:1122-8

If these results are supported by other studies, the use of ultrasound for the diagnosis of temporal arteritis may not only be reliable but may also minimize biopsy-associated trauma to patients, he concluded. ■

# Walking Test Not a Good Indicator of Lung Function in Interstitial Disease

BY DEEANNA FRANKLIN
*Associate Editor*

The 6-minute walk test is highly reproducible during trials of patients with interstitial lung disease secondary to scleroderma, but it may not be a valid outcome measurement because it correlates poorly with other standard physiologic measurements for lung functioning, reported Dr. Maya H. Buch, of the University of Michigan Scleroderma Program in Ann Arbor, and her colleagues.

In a study of 163 patients with interstitial lung disease (ILD) secondary to scleroderma (SSc), researchers had each participant perform a 6-minute walk test (6MWT). In a space without additional oxygen, they were instructed to walk back and forth in a hallway as many times as they could for 6 minutes. Participants were allowed to stop, slow down, and rest as needed. The test was stopped if patients were exhausted or experienced chest pain, leg cramps, or diaphoresis. Those with very mild or very severe lung impairment were excluded (Ann. Rheum. Dis. 2006 [Epub ahead of print]; doi:10.1136/ard.2006.054866).

The data were taken from the results of a 12-month, double-blind, placebo-controlled study that compared the drug bosentan with a placebo for the treatment of SSc-ILD. Participants came from 29 centers in 10 countries. There were 122 women and 41 men; 95 (58%) patients were classified as having diffuse SSc and the remaining 42% had limited SSc. Their mean age was 52.3 years, and the mean disease duration was 6.4 years.

When it came to the 6MWT, 152 participants had less than 15% variability between their first and second tests. Eleven patients required a third test, and there was less than 15% variability between their second and third 6MWT. Mean distance walked was 396.6 m on test one, compared with 399.5 m on test two. Mean overall distance for the two walks was 398 m, and "the mean absolute difference for an individual patient between the two walks was 20.75 m," said Dr. Buch and her colleagues.

After the 6MWT, a rating of dyspnea was measured using a Borg scale. After walk one, the mean Borg dyspnea index was 2.75, and after walk two it was 2.79. The overall mean Borg score was 2.77, with a mean absolute difference between the assessments of 0.8. According to the researchers, the mean percentage predicted diffusing capacity was 46% and mean percentage predicted forced vital capacity (FVC) was 71%.

There was only a minimal correlation between the 6MWT and the Borg dyspnea scale. There was a weak correlation between the 6MWT and percentage predicted FVC, and the walk test did not correlate at all with mean percentage predicted diffusing capacity. Also, there was a "very weak correlation" between mean percentage predicted diffusing capacity and the Borg dyspnea scale.

"The primary finding of this study is the high intertest reproducibility of the test. We, however, failed to demonstrate correlation of the 6MWT with pulmonary function parameters. This raises the question of what exactly is being measured by the test," commented Dr. Buch and her colleagues.

They speculated that "multiple confounding variables in the assessment of SSc-ILD" might account for the failure to establish a correlation between the 6MWT and the traditional lung function parameters.

These variables would include subtle cardiopulmonary responses and comorbidity not detected by the lung function tests. Other possibilities not related to SSc that might account for the lack of correlation include variability in FVC and interlaboratory variation in measurement of mean percentage predicted diffusing capacity.

Additionally, participants may have exhibited different psychological responses to exercise, which "could lead to either a training effect or decompensation. Separately, temporal and adaptive changes in breathing patterns could also facilitate exercise performance," said the researchers. They concluded that further studies and greater "clarification of the relative contributions of nonpulmonary manifestations of SSc on exercise capacity" are needed before the 6MWT could be accepted as a valid assessment criterion, the investigators said. ■

# *Sclerosis Sine Scleroderma May Not Be All That Rare*

BY BRUCE JANCIN
*Denver Bureau*

KEYSTONE, COLO. — Systemic sclerosis sine scleroderma should be considered in a patient with the common internal manifestations of scleroderma but not the sclerodactyly, digital ulcers, or other cutaneous features of the disorder, Dr. Richard T. Meehan said at a meeting sponsored by the National Jewish Medical and Research Center.

**Consider the diagnosis in patients with severe GERD and interstitial lung disease.**

**DR. MEEHAN**

"When you see patients who don't have scleroderma on their hands but they've got severe gastroesophageal reflux disease [GERD] and interstitial lung disease, they really might have this disorder," said Dr. Meehan, head of rheumatology at the center.

In a series of 555 consecutive patients in the University of Pittsburgh scleroderma databank without diffuse cutaneous involvement, 9% carried the diagnosis of systemic sclerosis sine scleroderma; the remaining 91% were classified as having limited cutaneous systemic sclerosis.

Systemic sclerosis sine scleroderma is sometimes categorized as an extreme pole of systemic sclerosis with limited cutaneous involvement, and it may not be all that rare, according to Dr. Meehan and his colleagues.

They recently reported encountering over the course of 1 year six affected patients, aged 40-86 years.

All the trial participants had progressive interstitial lung disease, severe GERD, and telangiectasias, and all were positive for nucleolar antinuclear antibodies. All six were negative for anticentromere antibodies.

Four of the six patients had Raynaud's phenomenon. Dr. Meehan described the presentation of new-onset Raynaud's phenomenon after age 40 years as a red flag for scleroderma.

Pericardial effusion was also present in five of the six systemic sclerosis sine scleroderma patients, as identified by high-resolution CT or echocardiography.

Of scleroderma patients, 90%-95% have adult-onset worsening Raynaud's. They frequently also have dysphagia or refractory GERD, Dr. Meehan noted. ■

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