

Study evaluates procedures for diagnosing sarcoidosis

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Among patients with suspected stage I/II pulmonary sarcoidosis who were undergoing confirmation of the condition via tissue sampling, the use of the procedure known as endosonographic nodal aspiration compared with bronchoscopic biopsy, the current diagnostic standard, resulted in greater diagnostic yield, according to a study in the June 19 issue of *JAMA*.

Sarcoidosis, a disease that causes granulomas (usually small masses) due to [chronic inflammation](#) in body tissues, has an estimated [lifetime risk](#) of 1 percent to 2 percent. The incidence of sarcoidosis in the United States is estimated at up to 40 cases per 100,000, and sarcoidosis-related mortality is increasing, according to background information in the article. The disease affects the lungs and intrathoracic [lymph nodes](#) in almost all patients. Bronchoscopy with transbronchial lung biopsies has moderate sensitivity in assessing granulomas. Endosonography with intrathoracic nodal aspiration (removal of tissue with a needle using ultrasound guidance) appears to be a promising [diagnostic technique](#).

Martin B. von Bartheld, M.D., of Leiden University Medical Center, Leiden, the Netherlands, and colleagues conducted a study to evaluate the diagnostic yield of bronchoscopy vs. endosonography in the diagnosis of stage I/II sarcoidosis. The [randomized trial](#) was conducted at 14 centers in 6 countries between March 2009 and November 2011 and included 304 patients with suspected pulmonary sarcoidosis (stage I/II) in whom tissue confirmation of noncaseating (not exhibiting caseation [necrosis in the tissue]) granulomas was indicated.

Patients underwent either bronchoscopy with transbronchial and endobronchial lung biopsies or endosonography (esophageal or endobronchial [ultrasonography](#)) with aspiration of intrathoracic lymph nodes. The primary measured outcome was

the diagnostic yield for detecting noncaseating granulomas in patients with a final diagnosis of sarcoidosis.

A total of 149 patients were randomized to bronchoscopy and 155 to endosonography. The researchers found that granulomas were found significantly more often at endosonography than bronchoscopy (114/154 [74 percent;] vs. 72/149 [48 percent]). The diagnostic yield to detect granulomas for endosonography vs. bronchoscopy was 80 percent vs. 53 percent.

"For stage I sarcoidosis, the diagnostic yield of bronchoscopy was 38 percent compared with 66 percent for stage II. For endosonography, diagnostic yield for stage I was 84 percent compared with 77 percent for stage II," the authors write.

Two serious adverse events occurred in the bronchoscopy group and 1 in the endosonography group; all patients recovered completely.

"How will the outcomes of this study affect future diagnostic strategies for patients with suspected sarcoidosis? Whether tissue confirmation of granulomas is indicated should be critically assessed in light of recent improvements in computed tomography-thorax imaging. For [patients](#) who require tissue sampling either to confirm sarcoidosis before treatment or to exclude similar presenting diseases such as tuberculosis and lymphoma, the outcomes of this study indicate that endosonographic evaluation is likely to have the highest diagnostic yield," the researchers conclude.

More information: *JAMA*. 2013;309(23):2457-2464

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