Cigarette Smoking and Male Sex Are Risk Factors for Ocular Sarcoidosis

ATS 2014, SAN DIEGO — Cigarette smoking and male sex are significant risk factors for developing ocular sarcoidosis, according to a new study presented at the 2014 American Thoracic Society International Conference.

Sarcoidosis is a disease in which inflammation produces tiny lumps of cells (called granulomas) in organs throughout the body, most often in the lungs, but also in the eyes, lymph nodes, or skin. Ocular sarcoidosis, which can lead to blindness, affects 25-50% of sarcoidosis patients.

“Risk factors for ocular sarcoidosis have not been well studied,” said lead author Adam Janot, MD, of the Virginia Commonwealth University School of Medicine in Richmond. “Accordingly, we reviewed the cases of 109 patients with biopsy-proven sarcoidosis and identified independent risk factors for developing ocular morbidity.”

Of the 109 patients, 21 had ocular sarcoidosis. A significantly higher percentage of patients with ocular sarcoidosis were smokers (71.4% vs 42.0%, p=0.027) and were male (57.1% vs 26.1%, p=0.009). Median duration of sarcoidosis was 10 years among patients with ocular sarcoidosis and 4 years among those without (p=0.031).

In analyses adjusting for age, race, sex, and other factors, tobacco exposure was associated with a greater than 5-fold risk of developing ocular sarcoidosis (odds ratio 5.24, p=0.007, 95% CI 1.58-17.41) and male sex was associated with a greater than 7-fold risk (odds ratio 7.48,
p=0.002, 95% CI 2.152-26.006). Disease duration was no longer significantly associated with developing ocular sarcoidosis in the multivariate analysis.

“Our study is the first to correlate smoking and male sex as risk factors for developing ocular manifestations of sarcoidosis,” said Dr. Janot. “If confirmed in other studies, this information may give some insight into the pathology of the disease, can be useful in guiding treatment, and it adds ocular sarcoidosis to the numerous adverse health consequences of tobacco use.”

###

* Please note that numbers in this release may differ slightly from those in the abstract. Many of these investigations are ongoing; the release represents the most up-to-date data available at press time.

Abstract 53088
Cigarette Smoking And Male Sex Are Independent Risk Factors For Ocular Sarcoidosis
Type: Scientific Abstract
Category: 09.27 - Sarcoidosis: Clinical Evaluation and Treatment (CP)
Authors: A.C. Janot, D. Huscher, M. Walker, H.K. Grewal, S.L. Cenac, M. Yu, M.R. Lamm, L.A. Saketkoo; –1Virginia Commonwealth University-School of Medicine-Richmond, VA/US, 2Charité Universitätsmedizin, Rheumatology and Clinical Immunology - Berlin/DE, 3Louisiana State University Health Sciences Center - New Orleans, LA/US; acjanot1@gmail.com

Abstract Body

Background/Rationale: Sarcoidosis is a multi-organ system granulomatous disease of unknown origin with an incidence of 1-40/100,000. Though pulmonary manifestations are predominant, ocular morbidity is characteristic. Ocular Sarcoidosis (OS) affects 25-50% of patients with sarcoidosis and can lead to blindness. To date, no studies have sought to determine risk factors for OS.

Methods: A retrospective chart review was conducted at a single institution with inclusion criteria of biopsy-proven sarcoidosis with a duration of >1 year and a documented smoking status. Variables collected were ages at time of diagnosis (of any organ) and at time of chart review, race, sex, smoking status, quantity of tobacco exposure, date of diagnosis and presence (or history) of OS. Disease duration is defined as the difference of age at diagnosis and age time of chart review. Group comparisons were done by t-test and by Mann-Whitney tests where applicable. Univariate and multivariate regression analysis were done to identify independent risk factors.

Results: Of 269 charts reviewed, 109 patients met inclusion criteria. Characteristics of patients with and without OS are shown in table 1. In the OS group, the portion of smokers (71.4%) was significantly higher than in the group without OS (42.0%, p=0.027). There was no significant difference (p=0.6) in the median number of pack years between smokers with OS (13 [7, 28]) and those without OS (16.5 [7, 25]). Furthermore, the OS group consisted of
more male patients (57.1% versus 26.1%, p=0.009). Median disease duration of sarcoidosis was also higher in patients with OS (10 years versus 4 years, p=0.031).

Through multivariate regression analysis, tobacco exposure (OR=5.24, p=0.007, 95% CI 1.58-17.41) and male sex (OR=7.48, p=0.002, 95% CI 2.152-26.006) were found to be independent risk factors for the development of OS.

**Conclusion:** Male sex and tobacco exposure (regardless of pack years) are independent risk factors for development of OS. Disease duration did not withstand multivariate analysis, in this moderately sized group. However screening for OS should not remit in patients with known sarcoidosis until defined in larger prospective populations.