European Respiratory Society
Annual Congress 2012

Abstract Number: 924

Publication Number: P4020

Abstract Group: 6.2. Occupational and Environmental Health

Keyword 1: Mesothelioma **Keyword 2:** Environment **Keyword 3:** Epidemiology

Title: The evaluation of the relationship between malignant mesothelioma and environmental asbestos exposure in Sivas

Dr. Serdar 3539 Berk serdar_berk@mynet.com MD [1], Prof. Dr Hüseyin 3540 Yalçin yalcin@cumhuriyet.edu.tr [2], Dr. Kursat 3541 Epozturk kursat@doctor.com MD [1], Dr. Omer Tamer 4460 Dogan tdogangs@gmail.com MD [1], Prof. Dr Zehra 4461 Seyfikli zseyfikli@cumhuriyet.edu.tr MD [1] and Prof. Dr Ibrahim 4462 Akkurt iakkurt@cumhuriyet.edu.tr MD [1]. [1] Department of Chest Diseases, Cumhuriyet University, Faculty of Medicine, Sivas, Turkey, 58140 and [2] Department of Geological Engineering, Cumhuriyet University, Sivas, Turkey .

Body: Objectives: Sivas province is located in the Central Anatolia where asbestos exposure is common. We aimed to study the relationship between environmental mineralogical effects and epidemiologic features of patients with MM. Methods: In total, 219 patients with MM who were diagnosed in our hospital between 1993 and 2010 were retrospectively analyzed in terms of demographical and clinical features. Rock, soil and house plaster samples were taken from the habitats of those patients and were evaluated with optical microscopy and X-ray diffraction methods. Results: The patients aged between 18 and 85 years (male/female ratio=1.4). Most of the patients (86%) confirmed an asbestos exposure history. The most frequent symptoms were chest pain (60%) and dyspnea (50%) and the duration of the symptoms was 4 months in average. The plaster materials used in most of the houses were made up of mainly carbonate and silicate minerals and some chrysotile. Ophiolitic units contained fibrous minerals such as serpentine (clino+orthochrysotile) chiefly and pectolite, brucite, hydrotalcite and tremolite/actinolite in smaller amounts.

Conclusions: MM is primarily related to environmental chrysotile exposure in Sivas. However, single or combined roles and/or interactions of other fibrous and non-fibrous minerals in the etiology of MM are not yet fully understood and remain to be investigated.