J Bras Pneumol. 2022;48(5):e20220349
https://dx.doi.org/10.36416/1806-3756/e20220349

Malignant mesothelioma: health care awareness and preparedness

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Malignant mesothelioma (MM) is a rare cancer. Malignant pleural mesothelioma (MPM) is the most prevalent primary cancer in the pleura.[1] MM is considered the hallmark of asbestos exposure. As it happens with rare diseases, the recognition of MM is strongly dependent on its regional incidence and on the awareness of the attending physician. A recent study linking Brazilian public health databases from 1996 to 2017 retrieved 2,405 records of MM as the underlying or contributing cause of death. It grossly corresponds to 200 deaths per year.[2]

In this number of the *Jornal Brasileiro de Pneumologia*, Gregorio et al.[3] retrospectively described the time spent from the onset of initial symptoms to death in 66 patients (52 men and 14 women) with MPM. The authors smartly have broken the analyses into four distinct stages: 1. from initial symptoms to referral to a specialized service; 2. during diagnostic workup; 3. during tumor staging and treatment options; and 4. from treatment to death. By breaking the analyses into time periods, they were able to identify and discuss diagnostic barriers in some of the stages.

First, the authors showed that in only 27/66 (41%) of the cases a history of asbestos exposure was retrieved.[3] Second, the median time from the onset of initial symptoms to referral to a specialized service was 6.5 months. After initiating specialized diagnostic workup, the median time for histopathological definition, disease staging, and beginning of treatment was 3.2 months. Finally, it took less than 11 months from the beginning of treatment to death.

The importance of retrieving a positive history of asbestos exposure is highlighted by the significant shorter time of referral of these patients to a specialized service, compared with those without a history of asbestos exposure (231.5 vs. 419.5 days).[3] What seems to be certain is that a history of occupational or nonoccupational asbestos exposure was not appropriately taken, or not even taken at all, since most health care workers are unfamiliar with it. Even when taken correctly, the occupational history can be flawed by the patient's recall bias related to past exposures, as MPM characteristically appears 30-50 years after the beginning of the exposure,[4] even after brief exposures. This information gap is supposed to improve with the current setting up of a Brazilian national database of all asbestos-exposed workers which includes individual occupational histories. Full access to this database (designated DATAMIANTO) will potentially be granted to any specialized health care unit in the country.[5] Thus, any diffuse pleural ailment or pleural effusion diagnosed in a patient with a record in that database might be suspected of MPM for being a former asbestos worker. Information on domestic indoor asbestos exposure due to occupational exposure of one member of the family can also be retrieved. It is well known that family members living in the same household can be exposed to considerable amounts of asbestos brought home on working clothes. Para-occupational (i.e., working not directly with asbestos but in workplaces where asbestos is manipulated) and environmental exposures to asbestos (e.g., living around asbestos mines or asbestos-cement plants, as well as other less conspicuous situations) will continue to be a difficult issue.

The delay in referring MPM cases to a specialized service was mainly caused by the absence of MPM suspicion and the performance of many nondiagnostic procedures, such as pleural fluid drainage to alleviate symptoms.[3] Only 27 (40.9%) of those patients were submitted to pleural biopsies prior to referral; of these, one quarter had false-negative results. Due to the lack of a previous diagnosis, insufficient biopsy materials, or negative results, 40 patients were biopsied at the specialized unit. Of these, 9 (22.5%) had false-negative results (by needle biopsy in 8 and by surgical biopsy in 1), leading to further procedures.[3] These findings reinforce the necessity of video-assisted thoracoscopy to obtain adequate pleural tissue samples for histopathology and immunochemistry workup, discouraging blind pleural biopsies, which have less sensitivity and specificity. This recommendation was highlighted in recent guidelines on MM and MPM diagnosis and management.[6-10]

Dealing with a clinically devastating neoplasm, the observed median of 9.7 months from the onset of initial symptoms to the beginning of specific treatment can be considered an excessive delay,[3] although this is in line with other series from developed countries.[6-8] However, several studies have showed a significant survival time in patients treated at initial stages, when clinical performance status is still satisfactory.[7,8,11]

Despite being a retrospective descriptive study,[3] the expressive number of cases of MPM brings us important information that sheds light on the necessity of creating diagnostic awareness among physicians and of following guidelines in order to utilize appropriate diagnostic procedures. Because asbestos production and consumption in Brazil peaked in the late 1980s, we are supposed to be at the beginning of an increase in the incidence of MM and MPM.[12]

CONFLICTS OF INTEREST

None declared.

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