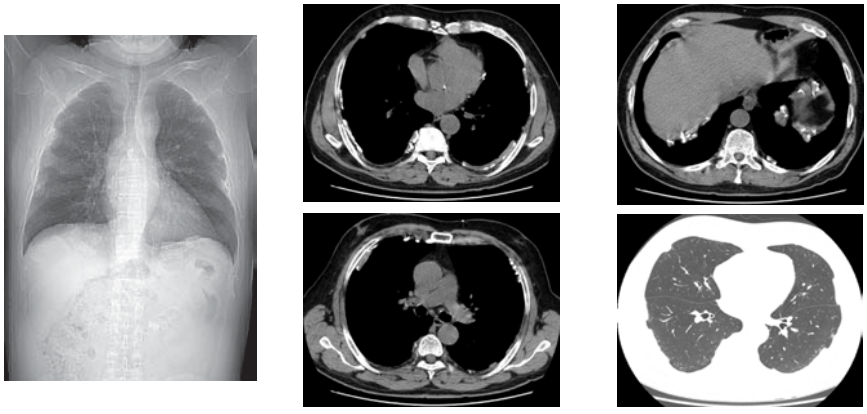
Radiological Diagnosis

Diagnosis of the case presented in the previous edition

J Bras Pneumol 2006;32(5):486

PLEURAL PLAQUES RELATED TO ASBESTOS



70-year-old asymptomatic male patient
presenting alterations on a routine chest X-ray

COMMENTS

Pleural plaques are the most common manifestation of asbestos exposure. They can occur after the inhalation of any type of fiber and are considered markers of exposure. They consist of focal thickening of the parietal pleura and are generally bilateral. They more commonly involve the pleura of the posterior and lateral portions of the chest wall, between the sixth and tenth ribs, and the diaphragmatic pleura, especially the upper portion. They present slow growth and, over the years, tend to calcify in approximately 5 to 15% of the cases.

Most plaques occur in the absence of asbestosis, which is the pulmonary fibrosis induced by asbestos. They are seen on chest X-rays as focal pleural thickening parallel to the internal margin of the chest wall. Those located in the anterior or posterior portions, also known as 'en face' or 'face on' plaques, appear as ill-defined opacities with irregular borders. Computed tomography (CT) scans present greater sensitivity and specificity than do simple X-rays. On CT scans, pleural plaques are characterized as focal pleural thickening, generally bilateral, discontinuous, with smooth borders, plateau morphology and, at times, with calcifications. The majority of authors consider high resolution CT to be better than conventional CT in the detection of pleural plaques, due to its greater spatial resolution.

Asbestos-related plaques should be differentiated from other affections, such as diffuse pleural thickening, infection related plaques and pleural metastases, as well as, on simple X-rays, from extrapleural fat and costal fractures. In the literature, there is no evidence of malignant transformation of asbestos-related pleural plaques.

DANY JASINOWODOLINSKI, GUSTAVO DE SOUZA PORTES MEIRELLES, NESTOR L MÜLLER
Fleury Center for Diagnostic Medicine, São Paulo, São Paulo, Brazil; Universidade Federal de São Paulo (UNIFESP - Federal University of São Paulo), São Paulo, São Paulo, Brazil; University of British Columbia, Vancouver, British Columbia, Canada.

REFERENCES

1. Kim KI, Kim CW, Lee MK, Lee KS, Park CK, Choi SJ, et al. Imaging of occupational lung disease. Radiographics 2001;21(6):1371-91.
2. Gallardo X, Castaner E, Mata JM. Benign pleural diseases. Eur J Radiol 2000;34(2):87-97.
3. Peacock C, Copley SJ, Hansell DM. Asbestos-related benign pleural disease. Clin Radiol 2000;55(6):422-32.
4. Hillerdal G. Nonmalignant pleural disease related to asbestos exposure. Clin Chest Med 1985;6(1):141-52.

READERS CORRECTLY DIAGNOSING THE CASE PRESENTED IN THE SEPTEMBER/OCTOBER 2006 ISSUE:

Alessandro Vito Lido - Universidade de Campinas - UNICAMP - Campinas - PA
Alfredo N. C. Santana - Universidade de São Paulo - USP - São Paulo - SP
André Galante Alencar Aranha - Universidade Metropolitana de Santos - UNIMES - Santos - SP
Ednei Pereira Guimarães - Hospital SOCOR - Belo Horizonte - MG
Lúcia Helena Messias Sales - Universidade Federal do Pará - UFPA - Belém - PA
Marcelo Jorge Jaco Rocha - Hospital Universitário Walter Cantídeo - Fortaleza - CE
Marcos César Santos de Castro - Universidade Federal Fluminense - UFF - Niterói - RJ
Marcos Manzini - Instituto do Coração - InCor - São Paulo - SP
Maura Dumont Hüttner - Fundação Universidade Federal do Rio Grande - FUFRG - Rio Grande - RS
Michelle Dantas Diógenes Saldanha - Centro de Diabetes de Fortaleza - Fortaleza - CE
Mirna Alameddine - Universidade de São Paulo - USP - São Paulo - SP
Ricardo Domingos Delduque - Hospital Emílio Carlos - Catanduva - SP
Rimarcs Gomes Ferreira - Universidade Federal de São Paulo - UNIFESP - São Paulo - SP
Rui Haddad - Universidade Federal do Rio de Janeiro - UFRJ - Rio de Janeiro - RJ