

# Diagnosis of asbestos-related pleuropulmonary diseases

M. GOVERNA, MONICA AMATI, DONATA BELLIS\*, ELISABETTA BICHISECCHI\*\*, LORY SANTARELLI

Dipartimento di Patologia Molecolare e Terapie Innovative, Area di Medicina del Lavoro, Università Politecnica delle Marche, Ancona

\* Servizio di Anatomia ed Istologia Patologica e di Citodiagnostica, ASL4, Ospedale Emergenza Torino Nord San Giovanni Bosco, Torino, e Centro Interdipartimentale per lo Studio degli Amianti e di altri Particolati Nocivi "G. Scansetti", Università degli Studi di Torino

\*\* U.O. Radiologia Clinica, Dipartimento di Scienze Radiologiche, Azienda Ospedaliero-Universitaria Ospedali Riuniti, Ancona

## KEY WORDS

Asbestosis; interstitial fibrosis; mesothelioma

## SUMMARY

*A revision of criteria for diagnosis of asbestos-related pathological conditions was performed studying specially asbestosis, pleural plaques and malignant mesothelioma, also taking into account the problems connected with histopathology. As regards the histological diagnosis of asbestosis, it requires the presence of diffuse interstitial fibrosis in a well inflated tissue remote from the site of a tumour or other large lesion, plus the presence of two or more asbestos bodies in a 1 cm<sup>2</sup> section. As regards the imaging diagnosis, the HRTC 4-point scale proposed by Paris et al. (2004) has been adopted: - 0 images not suggestive of interstitial pneumonia; - 1 modest unilateral or bilateral interstitial abnormalities, involving restricted areas if bilateral; - 2 interstitial abnormalities of limited extent, but consistent with a diagnosis of asbestosis, i.e. honeycombing, even without other parenchymal changes and even though unilateral, or else any two abnormal findings among thickened interlobular septa, intralobular lines or subpleural curved lines; - 3 numerous bilateral changes on several slices involving more than 2/3 of the posterior third of each hemi thorax. Only points 2 and 3 were considered consistent with the diagnosis of lung fibrosis. Such HRCT findings are not specific for asbestosis, changes in the pleural wall such as diffuse plaques and thickenings contribute to the diagnosis of asbestosis. As regards the pleural plaques and asbestos bodies we remark that they are merely exposition markers. We also discussed the problems the pathologist may encounter in diagnosing mesothelioma; in this field the prospects are encouraging as microarray analysis are beginning to identify new molecular markers for mesothelioma.*