

肺活检及支气管镜检查在弥漫性肺疾患和尘肺诊断中的价值

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摘要: 目的 探讨对弥漫性肺疾患和尘肺的较好的诊断方法。方法 通过纤维支气管镜检查、BALF 分析及肺活体组织检查, 综合分析诊断。结果 经纤维支气管镜检查、BALF 分析检出粉尘颗粒、石棉纤维、石棉小体以及在肺活体组织检查中发现石英、氧化铝粉尘颗粒、石棉纤维或石棉小体, 肺间质纤维化及肺组织结构破坏等改变而明确了矽肺、氧化铝尘肺和石棉肺的诊断。结论 在 BALF 及肺组织中检出病源性粉尘颗粒或石棉小体、肺间质纤维化或矽结节、肺泡结构破坏等改变即可确立尘肺或其他弥漫性肺疾患的诊断。

关键词: 外源性变应性肺炎; 饲鸽者肺; 活体组织检查; 纤维支气管镜检查; 弥漫性肺疾患; 尘肺; 特发性肺间质纤维化

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Bioptic and bronchoscopic examination in diagnosis of diffuse pulmonary disorders and pneumoconioses

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Abstract: **Subjective** To explore the value of bronchoscopic examination, BALF constituents and the bioptic findings of lungs in diagnosis of diffuse lung pulmonary disorders and pneumoconioses. **Method** On the basis of bronchoscopic examination, BALF analysis and the results of transbronchial lung biopsy, the diagnosis of pneumoconiosis or other diffuse lung disorders were confirmed. **Results** In an old patient with diffuse pulmonary fibrosis, the idiopathic pulmonary interstitial fibrosis was confirmed by bioptic examination of lung tissue; a young man was suffering from coughing, expectoration and short breath for a month, with a history of pigeon breeding for 2 years. The signs: Crepitant rales, increased markings and reticular opacities in the both lung bases, and increased cell count and lymphocytes in BALF. Diagnosis: extrinsic allergic alveolitis (pigeon breeder's lung). In the workers exposed to silica, alumina dusts or asbestos fibers, the pathogenic particles or asbestos-bodies were found in the BALF and lung tissue, the diagnosis of silicosis, aluminosis or asbestosis was confirmed respectively. **Conclusion** The pathogenic particles or asbestos bodies in BALF and/or in lung tissues, interstitial fibrosis or silicotic nodules, disturbed alveolar structure are found, the pneumoconiosis or other diffuse pulmonary disorders might be confirmed.

Key Words: Extrinsic allergic alveolitis; Pigeon breeder's lung; Biopsy; Bronchoscopy; Diffuse pulmonary disorders; Pneumoconiosis; Idiopathic pulmonary interstitial fibrosis

弥漫性肺疾患是临床经常遇到的呼吸系统疾病, 有些病例的诊断和鉴别诊断十分困难。医生除了应密切观察病情的发展和变化、临床症状、体征、胸部 X 线所见外, 还应留心可能导致发病的接触史和职业史, 并收集病原学和组织学的材料, 以明确诊断。我们通过支气管镜检查, 对支气管灌洗液 (BALF) 和肺活体组织检查结果的分析, 明确了个别疑难病例的诊断。现将典型病例报告如下, 以供参考。

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1 病例资料

[例 1] 男性, 76 岁。干咳、进行性呼吸困难 2 年, 以间质性肺疾病、肺内感染入院。无粉尘及有毒气体接触史。两肺下部有 Velcro 啰音 (细小的爆破音或捻发音), 有杵状指 (趾)。胸部 X 线改变为两肺弥漫性网络结节影, 肺功能为轻度限制性通气功能障碍。支气管镜肺活检 (TBLB) 结果: 细支气管衬以纤毛柱状上皮, 壁内炭末沉着, 周围有肺泡扩张, 肺泡壁增厚, 纤维组织增生, 诊断为特发性肺间质纤维化 (IPF)。

[例 2] 男性, 34 岁。一个月以来无明显诱因

而常咳嗽、气短，咳少量白色粘痰。曾静滴青霉素 960 万单位，每日 1 次，8 天后症状减轻而停药。两周后上述症状再发，静滴及口服红霉素，虽有所减轻，但又加重而住院。两年来饲鸽数十只，经常清理鸽笼、鸽粪。查体：双肺下部有密集的捻发音，X 线胸片两肺下野呈网状影，CT 显示两肺透过度减低，呈磨玻璃状，纵隔无淋巴结肿大。支气管镜检查双侧各组支气管管口及粘膜未见特殊改变。支气管肺灌洗液 (BALF)：细胞总数增高 ($0.26 \times 10^6/\text{ml}$)，淋巴细胞增高 (41%)，T 细胞亚群： T_3 70%， T_4 43%， T_8 57%， C_4/CD_8 比值倒置。BALF 的结果支持外源性变应性肺泡炎的诊断。痰抗酸杆菌阴性，冷凝试验 1:4 倍阴性，血清沉淀试验 (+)。肺功能：小气道功能降低，轻度限制性通气功能障碍，弥散功能降低。给予强的松治疗 (40 mg，每日 1 次)。治疗后病情减轻而出院。本例最后确诊为外源性变应性肺泡炎 (饲鸽者肺)。

[例 3] 男性，64 岁，工人，接触石英粉尘 40 年。有咳嗽、咳痰、气短等症状，双肺可闻及啰音，肺功能有中度混合性通气功能障碍。肺部 X 线表现：两肺下野肺纹理增强，仅在左下肺野有 I 级密集度的不规则小阴影 (s)，按我国尘肺诊断标准和分类标准为 0⁺，属可疑病例。

为明确诊断行支气管镜检查，双侧支气管粘膜苍白、肿胀，并有色素斑，右上、中、下支气管口狭窄及色素沉着。BALF：总蛋白 110 mg/dl，白蛋白 35 mg/dl，乳酸脱氢酶 (LDH) 231.93 U/dl，ACP 50 U/ml，SOD 699.73 $\mu\text{g/L}$ 。肺活体组织检查：在肺组织中有石英颗粒沉着，肺间质纤维化及肺泡结构破坏。这些改变符合肺活检的组织学尘肺诊断标准，诊断为 I 期矽肺。

[例 4] 女性，53 岁，接触氧化铝粉尘 25 年。有咳嗽、咳痰、气短等症状。肺功能为轻度阻塞性通气功能障碍。肺部 X 线：两肺下野有 I 级密集度的不规则小阴影 (s)，考虑氧化铝粉尘致纤维化作用并不强烈，对其 X 线表现也不熟悉，列为疑似病例，因而行支气管镜检查：支气管粘膜有红肿和色素斑。BALF：总蛋白 50 mg/dl，白蛋白 8 mg/dl，细胞数 $20.82 \times 10^4/\text{ml}$ ，LDH 144.67 U/dl，ACP 14.36 U/ml，SOD 283.2 $\mu\text{g/L}$ 。肺活检：肺组织中有氧化铝颗粒沉着，肺间质纤维化和肺泡结构破坏。综合各项改变，诊断为 I 期氧化铝尘肺。

[例 5] 男性，53 岁，工人，接触石棉粉尘，

无吸烟史。有咳嗽、咳痰、气短等症状。X 线胸片：两肺下野有 I 级密集度的不规则小阴影 (s)，支气管镜检查见支气管粘膜红肿。BALF：总蛋白 34 mg/dl，白蛋白 2 mg/dl，发现石棉小体；LDH 185.78 U/dl，ACP 86.2 U/ml，SOD 211.08 $\mu\text{g/L}$ 。肺活检：肺组织中检出石棉纤维及石棉小体，肺间质纤维化和肺泡结构破坏。最后诊断：I 期石棉肺。

2 讨论

2.1 对弥漫性肺病变的诊断有时是很困难的，常须长期住院、观察病情的进展，有时甚至须要进行试验性治疗以排除类似的疾病。如弥漫性肺纤维化的病种逾百种，确定诊断难度很大，如有组织学检查结果，可排除易于混淆的肺部疾病而确定诊断。如本文报告的例 1，病人经肺活体组织检查明确了诊断。

2.2 有些病例虽然明确了职业接触史，但胸部 X 线改变是否为尘肺病变，在鉴别诊断上也仍有困难。特别是早期的尘肺病例，如有肺组织学检查常可提供很有价值的参考。肺活体组织学检查可以提供致病粉尘的存在以及肺组织对这些粉尘的反应和特征性的肺纤维化性改变。如例 3 肺组织中有石英颗粒沉着、肺间质纤维化和肺泡结构破坏，符合组织学尘肺诊断标准，确诊为 I 期矽肺。例 4 为一接触氧化铝粉尘的工人，X 线改变属轻微改变，考虑氧化铝粉尘的致纤维化作用不强烈，因而诊断难以确定。经肺活检，除肺组织中有氧化铝颗粒沉着外，还有明显的肺间质纤维化和肺泡结构破坏而确诊为 I 期氧化铝尘肺。这种检查手段不仅解决了病人的诊断问题，也为不少病种临床诊断积累了经验。例 5 为接触石棉的工人，X 线胸片有轻度改变，不具特征性。在支气管镜检查和 BALF 的分析及石棉小体的检出，都有力地支持了石棉粉尘对肺的影响，尤其肺活检在肺组织中检出石棉纤维及石棉小体、肺间质纤维化和肺泡结构破坏，而确诊了石棉肺的诊断。

2.3 支气管镜检查及 BALF 的分析对病情的活动情况、治疗效果评价均有一定的参考价值。矿物颗粒及石棉小体的检出对确定诊断十分有用。例 2 纤维支气管镜检查及 BALF 结果分析，均支持外源性变应性肺泡炎的诊断；在结合接触史、肺功能、血清沉淀反应等结果而确定为饲鸽者肺，得到适当治疗，脱离接触而防止再发。

2.4 如能在全面考虑病情的情况下，行肺活检及纤维支气管镜检查和 BALF 分析，对评估病情，确定诊断等有一定的参考价值，对个别诊断 (下转第 227 页)

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(上接第 212 页) 困难的病例可以选择应用。

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