

L.S.Malofiy

Ivano-Frankivsk
National Medical
University

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FEATURES AND PATTERNS OF EXPRESSION OF LECTIN RECEPTORS IN THE LUNGS OF PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE EXACERBATION AND REMISSION

The research was conducted as part of research work «Pathomorphology of the cardiovascular system, placenta, adipose tissue, kidneys, brain, regulatory systems (APUD, immune) in metabolic syndrome, acute myocardial ischemia, obliterating diseases of lower extremities, pulmonary diseases, neoplastic processes, and intrauterine infection in clinic and experiment» (state registration 0107U002769).

ABSTRACT. Background. Chronic obstructive pulmonary disease is a widespread pathology, and the problem of its diagnostics is still of current interest. **Objective.** To determine the principles of lectin receptors expression and distribution in patients with chronic obstructive pulmonary disease during remission and exacerbation. **Methods.** For lectin histochemical investigations biopsy material from 54 patients with chronic obstructive pulmonary disease was used. All patients were subdivided into 2 groups: 25 at remission phase, 29 – at exacerbation. Direct lectin histochemical method was used. **Results.** Wheat germ lectin (WGA) increases its affinity for squamous metaplasia; elderberry lectin and Snail lectin are reduced by epithelial cells while maintaining the reaction in areas of proliferation of bronchial epithelium in acute chronic obstructive pulmonary disease. Konkanavalin A lectin in most cases had weakly positive reaction on luminal surface of epithelial cells during remission of chronic obstructive pulmonary disease. **Conclusion.** The presence of wheat germ lectin and konkanavalin A in epitheliocytes of segmental bronchi reveals the formation of a chronic inflammation.

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✉ Doklesja@i.ua

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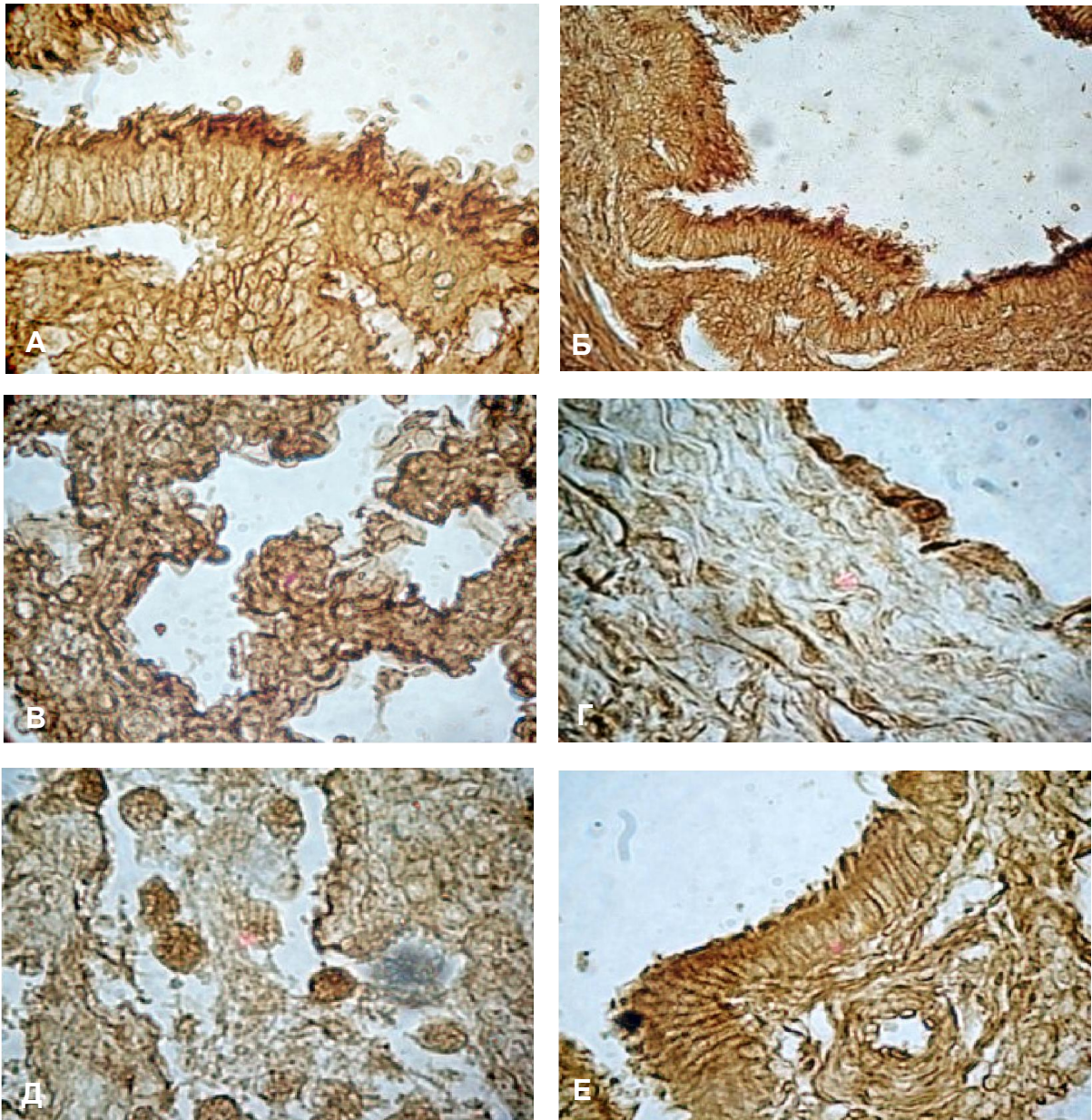


Fig. 1. Distribution of lectin receptors in the lungs of patients with COPD: A – intensive reaction with the WGA lectin in the ciliary epithelium of subsegmentary bronchus mucosa in the phase of COPD remission; Б – increased expression of WGA on the apical surface of epithelium and enhanced reactivity to the WGA lectin in the subsegmentary bronchus collagen fibers in the phase of COPD exacerbation; B – moderate reaction of LABA in the epithelial cells of the respiratory bronchioli in the phase of COPD remission; Г – moderate expression of HPA lectin in the endothelium of medium-sized vessels and poor expression of the fibrous structures of the lungs in in the phase of COPD exacerbation; Д – intensive expression of Con A lectin on the apical surface of respiratory ducts epithelium and the desquamated epitheliocytes in the lungs of patients with the exacerbation of COPD; E – intensive expression of epithelial cells and moderate reaction of the subsegmentary bronchus collagen fibers to the SBA lectin in the phase of COPD exacerbation. Lectin histochemical staining of the histological sections. Magnification: A, B, Д – 400; Б, Г, E – 200.

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