

QUALITATIVE ANALYSIS OF GLYCOSAMINOGLYCANS FROM PLEURAL TUBERCULOSIS AND LUNG CANCER PLEURAL EFFUSIONS

Albuquerque, E.M.M.¹; Cruz, A.K.M.¹; Chavante, S.F.¹; Mendes, A.³; Nader, H.B.³ Albuquerque, P.R.²; Oliveira, F.W.¹

¹Depto. de Bioquímica, CB; ²Depto de Medicina Integrada, CCS. UFRN, Natal-RN. ³Escola Paulista de Medicina, UNIFESP, São Paulo-SP.

Pleural tuberculosis and lung cancer are pathologies that often give rise to exudates in humans. These effusions usually result in a diagnostic dilemma. Glycosaminoglycans content has been used as a biochemical marker for the diagnosis of innumerable malignant, inflammatory and infectious diseases. The objective of this study was to perform the qualitative analysis of the glycosaminoglycans content in pleural effusions and to assess their potential for discriminating between pleural tuberculosis and lung cancer. Pleural tuberculosis and lung cancer pleural fluid samples were collected by thoracocentesis. Glycosaminoglycans were extracted by proteolyses, trichloroacetic acid and precipitation with ethanol. These glycosaminoglycans were analyzed for electrophoresis in agarose gel and enzymatic digestions with specific lyases. Molecular masses of glycosaminoglycans were determined by electrophoresis in polyacrylamide gel. Glycosaminoglycans types and molecular weights of hyaluronan were able to discriminate pleural tuberculosis and lung cancer. Qualitative analysis of the glycosaminoglycans content can be useful for the diagnostic separation of pleural tuberculosis and lung cancer.

Supported by: CAPES and CNPq

Key words: glycosaminoglycans, pleural effusions, qualitative analysis.