01

Immunocytoochemical panel for distinguishing between adenocarcinomas and reactive mesothelial cells in effusion cell blocks

[최유덕], 김조헌, 김가언, 김 영, 정은희, 김성순, 한창우, 이지신, 남종희
전남대학교 의과대학 병리학교실

Background : The differential diagnosis between reactive mesothelial cells (RMCs) and adenocarcinomas (ACs) is often difficult in effusion specimens. The application of immunocytochemistry, using a number of different monoclonal and polyclonal antibodies, has been shown to improve diagnostic sensitivity in distinguishing ACs from RMCs.

Objective : The aim of our study was to determine the value of a panel that consisted of one epithelial marker (MOC-31) and two mesothelial markers (D2-40 and calretinin) for distinguishing between RMCs and ACs in effusion fluids.

Materials and Methods : A total of 118 formalin-fixed, paraffin-embedded cell block specimens from pleural and peritoneal effusions, including 88 ACs and 30 benign effusions with RMCs were stained with antibodies against MOC-31, D2-40, and calretinin.

Results : Membranous reactivity for MOC-31 was observed in 88 of 88 samples (100%) of ACs, regardless of the specific primary site. All benign effusions with RMCs were negative for MOC-31. All cases of benign effusions with RMCs showed membranous staining with D2-40. One case of ACs exhibited focal reactivity for D2-40. All but 2 cases of benign effusions reacted positively with calretinin. Staining was noted in both the cytoplasm and the nucleus. In two ACs, scattered tumor cells demonstratedweak positivity for calretinin. RMCs in the background of ACs were consistently positive for D2-40 and calretinin. Overall, D2-40 highlighted more RMCs than calretinin. The staining combination of positive for MOC-31 and negative for D2-40 or calretinin was 100% specific and 99% sensitive for ACs.

Conclusions : Our data suggest that immunohistochemical studies performed on cell blocks with MOC-31, D2-40, and calretinin proved to be useful in the differentiation between ACs and RMCs. Compared with calretinin, D2-40 was a more sensitive marker of RMCs.