Can Survivin, IMP3 and GLUT-1 be helpful in the differential diagnosis of peritoneal effusion cytology?

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OBJECTİVES

The morphological differential diagnosis between malignant epithelial tumors and reactive mesothelial hyperplasia can be extremely challenging. The aim of this study is to determine whether there is a difference in the human insulin-like growth factor II mRNA binding protein 3 (IMP3), glucose transporter 1 (GLUT-1) and survivin staining between invasive malignant epithelial tumor cells and reactive mesothelial hyperplasia.

MATERIALS AND METHODS

We evaluated the staining of these markers on tissue microarray blocks prepared from cell blocks of 37 malignant and 17 benign peritoneal effusions.

RESULTS

Nuclear survivin staining was observed in 56.8% (21 cases) of malignant cases and 16.7% (3 cases) of benign cases (P=0.013) where as cytoplasmic survivin staining was positive in 100% (37 cases) of malignant and 94.1% (16 cases) of benign cases (P=1.0). Strong GLUT-1 staining was seen in 31.4% (11 cases) of malignant cases, where as in only 5.6% (1 case) of benign cases (P=0.041). Positive staining for IMP-3 was observed in 27.0% (10 cases) of malignant and 50% (9 cases) of benign cases (P=0.168).

CONCLUSIONS

Nuclear survivin positivity and strong GLUT1 staining in malignant cases are potentially useful markers in differential diagnosis of malignant epithelial cells and reactive mesothelial hyperplasia. IMP3 staining has no significant difference between malignant and benign cases.

Anahtar Kelimeler :Survivin, GLUT-1, IMP3, peritoneal effusion, cytology