

The Contribution of Cell Block Method to Histopathological and Immunohistochemical Diagnosis

Alptekin en*

Abstract

As in all fields of medicine, the pm o , thMo al al m a , o, the diferent organs, we performed in this context; The specificity of the technique we applied was determined to be 98%, the sensitivity was determined to be 95%, the positive prediction was determined to be 95%, the negative prediction was determined to be 98% accurate. We found that the contribution of the method we saw to be more remarkable, especially in the evaluation of joint fluids and abdominal aspiration fluids; we also found its contribution significant in the specifcation of lesions in soft tissue and thyroid fne needle aspiration. As a result, we think that the cell blocking method can be an important diagnostic support bridge between cytology and histology.

Ke - d : Cytology; Cell block; Diagnosis; Histology

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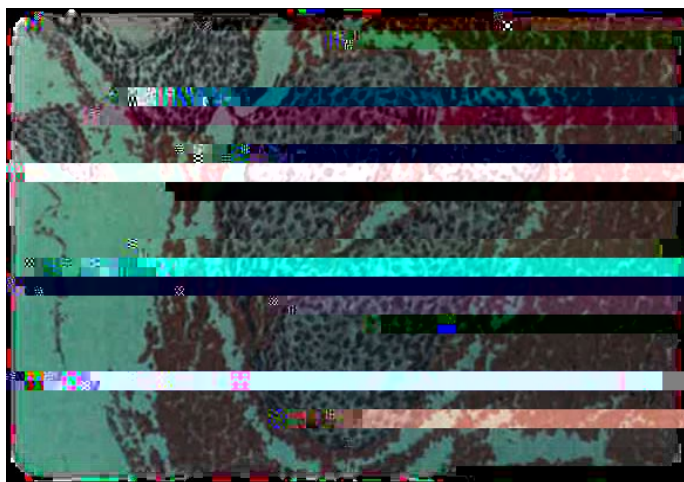


Figure 3: Pleura fluid: metastasis of squamous cell carcinoma. Atypical epithelial cells in irregular clusters. Cell block, HEx200.

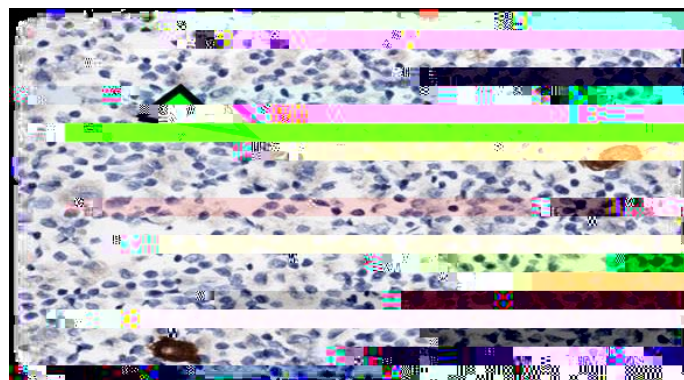


Figure 6: Pleura fluid: pancreatic adenocarcinoma metastasis. Atypical epithelial cells distributed in acinar structures. Cell block, HEx400.

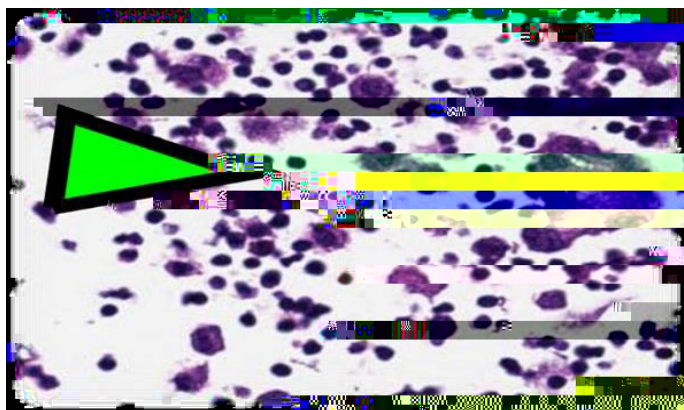


Figure 4: Pleura fluid: pancreatic adenocarcinoma metastasis. Atypical epithelial cells organized to form individual and irregular acinar structures (Digital pathology, cell block HE x400).

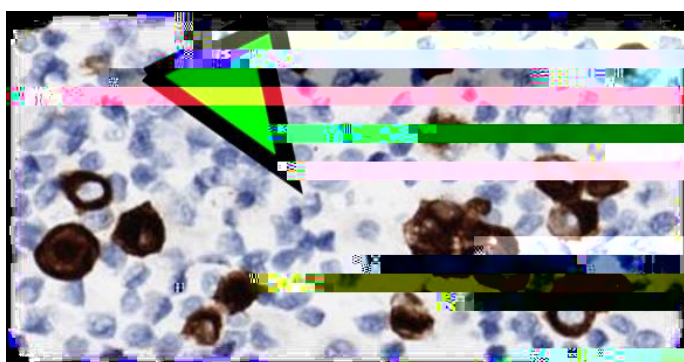


Figure 5: Pleura fluid: pancreatic adenocarcinoma metastasis. Atypical epithelial cells in individual and three-dimensional clusters. (Digital pathology, cell block. CK7 x400).

this number increased to 4 with cell block compared to only 2 positive diagnoses in terms of malignancy. 3 of our cases who were diagnosed positively in terms of malignancy; taken from different extremities and diagnosed as Ewing's sarcoma, malignant mesenchymal tumor, possibly osteosarcoma, malignant mesenchymal tumor, possibly chondrosarcoma. One of our cases was diagnosed as 'germ cell tumor metastasis' with the contribution of cell block and clinical correlation to the needle aspiration from retroperitoneal mass (Figure 11, 12).

Discussion

In recent years; both in the diagnosis and treatment phase, there is an intense tendency to procedures that are less harmful to patients. In almost all areas of medicine; the main principle of these studies is based on the principle of 'less invasive method better results'.

In this context; there have also been significant developments in pathology, from wedge biopsies to needle biopsies, from needle biopsies to fine needle biopsies and cytological examinations.

In addition; cytological examination, especially in areas where

biopsy is difficult to take (thorax, retro peritoneum, retro orbital region,

In our study, we performed 93 cytological sampling in classical cytology and cell blocking applications; In terms of the cases we call 'positive in terms of malignancy', cytologically approximately 12% (10 cases) and 23% (23 cases) in cell block were contributed.

Our Results; it agrees with previous large-scale studies on this subject [1, 3 and 4].

In our study; in cases evaluated as 'negative in terms of malignancy', the rate of diagnosibility; similar rates were found as 65% for cytological samples and 63% for cell block. However; in these cases, it is understood that the cell block is slightly superior to cytology in order to distinguish the diagnosis (granuloma, etc.). (29% vs. 34%) As a result of this study; it is consistent with the cell block study conducted by Dekker from cytology samples taken from body cavities [5].

In our study; 61% (13 cases) of the cases diagnosed as 'positive for malignancy' from cell block were confirmed histopathologically. In this ratio; seems to be in line with the studies on this subject [1 and 4].

The results of our thyroid fine needle aspiration study are also as follows; it is consistent with the work of Pietribiasi [6] and the work of Kung and Yuen [7].

In our study from paracentesis fluid samples that are stated to be the most meaningful diagnostic contribution of cell block; when combined with cytology, we observed an extra diagnostic contribution of 33% for 'malignancy-positive' cases. In these results; it seems to be in line with the work of Zito and Dekker [4, 5].

In our studies on soft tissue fine aspiration cytology; In addition to contributing to the 'positive in terms of malignancy' diagnosis, and perhaps more than that, the contribution to the specification of the diagnosis has attracted attention. (Ewing's sarcoma, osteosarcoma, chondrosarcoma etc.) Schwartz and Zollars in their study; in the case of soft tissue malignant melanoma (clear cell sarcoma) diagnosed with two cell blocks; they performed electron microscopic studies and

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