Audit of serous effusions cytology in patients with hematologic disorders

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Aim: To evaluate our laboratory accuracy in diagnosing malignancy in serous effusions from hematologic patients.

Methods: We have retrieved from our files 73 serous effusion cytology cases referred from hematology clinics recorded in 2015 and 2016. The corresponding patients had either known hematologic disease or malignancy or presented with symptoms raising the suspicion of hematologic disorder. We have correlated our diagnoses to the corresponding flow cytometry (FC) results, when available.

Results: Thirty nine (39) out of 73 serous effusions had cytology positive for hematologic malignancy. Twenty eight of them (71.8%) had flow cytometry, which was consistent with cytology in 24 cases (85.7%), while 6 were referred for molecular testing to confirm malignancy. Thirty one (42.4%) serous effusions had negative cytology. Nine of them (29%) had corresponding flow cytometry, which was consistent with cytology in 5 cases (55.5%) and non-consistent in 4 cases (44.5%). Referral for molecular analysis was mandatory for the discordant cases. Three effusions (4%) were diagnosed positive for non-hematologic malignancy.

Conclusions: Our results show sensitivity 87.8%, specificity 100%, NPV 55.5% and PPV 100% for cytology as compared to flow cytometry for diagnosing hematologic malignancy in effusions. The combination of cytology with flow cytometry and molecular analysis is essential for hematologic patients.

Biography
Panagiota Mikou is a Consultant in Cytopathology and Head of Cytopathology Department in Laiko Hospital, Athens, Greece. She was graduated from Medical School of University of Athens, Greece (MD), completed MSc in Cytopathology at Imperial College, London, UK and received her PhD in the University of Athens, Greece. She is a Member of the Hellenic Society for Clinical Cytology, the British Association of Cytology and a Fellow of the International Academy of Cytology. Her main fields of expertise are urinary, effusion cytology, FNA of palpable lesions and cervical cytology.

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