Objective

- Lung adenocarcinomas usually exfoliate in pleural cavity in the form of tight clusters and three-dimensional balls.
- Unlike carcinomas of breast and stomach where singly lying malignant cells can be seen in effusion samples, lung adenocarcinomas usually show cohesive morphology.
- This cohesive pattern of cells in effusion cytology may also be confused with reactive mesothelial cells.
- We aimed to study the incidence and cytomorphology of pulmonary adenocarcinoma with single cell pattern in our institution.

Methods

- All cases reported as either suspicious or positive for malignancy on pleural effusion cytology (PFC) over the past 1 year were retrieved.
- The clinical details were obtained from requisition forms.
- Cases with predominant single cell pattern of tumor cells clinically suspicious of carcinoma lung were segregated.
- These were destained and immunocytochemistry (ICC) for TTF-1 was performed for confirmation.

Results

- Of a total of 103 cases reported as either suspicious or positive for malignancy on PFC, 29 had a predominant single cell pattern.
- Of these, 13 (44.8%) were primary lung carcinoma. The rest were metastasis from ovary (5; 17.2%), breast (2; 6.9%), gastro-esophageal (2; 6.9%), lymphoma (1; 3.5%) and Ewing's sarcoma (1; 3.5%). Five (17.2%) were those with unknown primary.
- All cases of lung carcinoma were positive for TTF-1 ICC.

Conclusion

- Single cell pattern of pulmonary adenocarcinoma is commoner than popularly believed.
- This pattern may be difficult to differentiate from carcinoma cells of other sites as well as from reactive mesothelial cells.
- A high degree of suspicion is therefore needed to perform relevant ICC to clinch the correct diagnosis.

References