SUMMARY

Introduction:

Transbronchial needle aspiration (TBNA) is a beneficial, safe and minimally invasive bronchoscopic technique used in the diagnosis and staging of bronchogenic carcinoma. Several studies had proved a statistically significant difference in the diagnosis of bronchogenic carcinoma after addition of TBNA to conventional diagnostic techniques (CDT) such as bronchial washing (BW), bronchial brushing (BB) and forceps biopsy (FB) in the diagnosis of lung cancer.

Aim of the work:

This study was done to evaluate the role of transbronchial needle aspiration (TBNA) in the diagnosis of patients with bronchogenic carcinoma and comparing the results with other conventional diagnostic techniques.

Patients and methods:

The study was conducted on 20 patients with clinical and/or radiological suspicion of bronchogenic carcinoma .They were 12 males (60%) and 8 females (40%). Their ages ranged from 42 to 74 years with a mean age of 57.9 years,11 patients (55%) were cigarette smokers and 9 patients (45%) were non smokers .They were admitted to Chest Department, Benha University Hospital in the period between March 2009 and March 2010.

Patients' selection was based on:

Inclusion criteria:

1. Patients found to have peribronchial or submucosal disease on bronchoscopy or mediastinal lymphadenopathy on computed tomography.

2. Patients with bronchoscopic picture of subcarinal widening or extraluminal compression with or without endobronchial lesions or masses.

Exclusion criteria:

1. Uncooperative patients.
2. The presence of uncorrectable coagulation disorder.
3. Life-threatening arrhythmias or refractory hypoxemia.
4. Inaccessible group of lymph node as prevascular lymph nodes (para-aortic or retrocaval) for fear of major complications.
5. Patients with unstable angina or recent myocardial infarction.

All patients were subjected to the following:

1. Full history taking.
2. Complete clinical examination.
3. Chest X- ray (postero-anterior and lateral views).
4. Computed tomographgy of the chest with contrast.
5. Routine laboratory investigations as CBC, liver and kidney functions and ESR.
6. Fiberoptic bronchoscopy for inspection of the tracheobronchial tree and biopsy using TBNA and/or other sampling methods such as bronchial washings and forceps biopsy.
7. Histopathological and cytological examination of the obtained specimens.
8. Some patients needed other investigations to confirm or reach the final diagnosis such as:

- Percutaneous transthoracic CT guided biopsy for one case of adenocarcinoma (in which TBNA revealed lymphocytic infiltration).
- Pleural fluid cytology in one case of adenocarcinoma (in which TBNA revealed epithelial hyperplasia)

This study revealed the following results:

- The diagnostic yield of bronchial wash was (30%).
- The diagnostic yield of forceps biopsy was (45%).
- The diagnostic yield of TBNA was (85%).
- Addition of TBNA to the conventional diagnostic methods increased the diagnostic yield from (85%) to (90%).

CONCLUSIONS

- The diagnostic yield increased from 45% to 90% after addition of TBNA to conventional diagnostic techniques (Bronchial washing, Forceps biopsy)).
- Forceps biopsy is the best method for diagnosis of cases with exophytic mass lesions.
- TBNA is the best modality for diagnosis of cases with submucosal and Peribronchial lesions.
- TBNA is a valuable tool in giving both diagnostic and staging information in patients with lung cancer.
- There were statistically significant difference when comparing TBNA with both bronchial washing and forceps biopsy.
- TBNA is a safe method as there were no significant complications after its application.
- Application of TBNA decreases the need for other invasive investigations to sample the mediastinal lymph nodes.