SUMMARY

This study was done to evaluate the role of albumin as a tumor marker in patients with lung cancer.

The study was conducted on 20 patients (12 male and 8 females), they were admitted at Chest Department, Benha University Hospital, they were presented by hemoptysis, cough, fever, dyspnea or abnormal CXR. Fiberoptic bronchoscopy was indicated for diagnosis.

They were classified into two groups

***Group I*:** Cancer group, included 10 patients 7 males &3 females, their mean age 52.3 ± 11.8, presented with hemoptysis, cough, dyspnea, fever, hoarseness of voice, or abnormal CXR.

***Group II*:** Control group, included 10 patients, non smokers, 5 males &5 females, their mean age 53.7 ± 15.8, presented with hemoptysis, fever, cough, dyspnea, or abnormal CXR.

❖ All patients were subjected to the following studies:-

(1) Full history and complete physical examination.

(2) Plain CXR: P-A and lateral views.

(3) Laboratory investigations:

- Complete Blood Count (CBC).
- Erythrocyte Sedimentation Rate (ESR).
- Liver Function Tests (LFTs).
- Kidney Function Tests (KFTs).
- Serum albumin & Serum CEA.
- BAL albumin & BAL CEA.

(4) Computed tomography chest with contrast.

(5) Pulmonary function tests

(6) ECG

(8) Fiberoptic bronchoscopy with BAL procedure and biopsy taken from suspected lesions.

❖ This study revealed the following results:

1. There was no significant difference between the two studied groups as regard age and sex.

2. The serum levels of albumin in the two groups were almost identical, no significant difference between two groups, ($p > 0.05$).

3. The serum CEA levels of cancer group were significantly higher than those of the control group, ($p < 0.001$).

4. The mean level of CEA in ELF was significantly higher in cancer group than that of the control group, ($p < 0.001$).

5. The mean level of Albumin in ELF was significantly higher in cancer group than that of the control group, ($p < 0.001$).

6. There was positive relationship between albumin and CEA levels in ELF in the study group.

7. ELF albumin is more sensitive and more specific than serum CEA in the diagnosis of lung cancer

8. There was significant difference between cancer and control groups as regard BAL albumin and BAL CEA ($p < 0.05$), while there is no significant difference as regard CBC, ESR, LFTs, KFTs, ($p > 0.05$).

CONCLUSIONS

At present days, the tumor markers are widely used as assisting parameters for a diagnosis rather than being diagnostic, of patients suspicious of having malignancy, and for that reason it is suggested to use more than one tumor marker analysis for tumors including also pulmonary malignancies.

Albumin can be considered as an additional marker to differentiate neoplastic from non-neoplastic pulmonary diseases; this was suggested from the significant increase of its level in BAL & ELF in patients with lung cancer when compared with patients with non-neoplastic pulmonary diseases.

There was positive relationship between albumin and CEA in ELF in the study group.

Measurement of albumin in BAL and ELF is more sensitive and more specific than serum CEA in the diagnosis of lung cancer.