SUMMARY

The aim of this study was to estimate the serum level of calcitonin and calcium in patients with bronchogenic carcinoma & to compare it with the level in healthy subjects.

The material of this study included (30) individuals divided into two groups:-

Group (A): formed of (20) patients suffering from bronchogenic carcinoma, they were (17) males and (3) females, with age range between 35 - 66 years, the mean was (53.15 ± 9.40). Smokers were (16) patients and (4) were non smokers. Patients included after obtaining histopathological proof of cancer with the aid of the fibreoptic bronchoscope.

Group (B): comprised(10) healthy individuals as control; (6) males and (4) females, the age range was between 25 - 45 years, the mean was (36.3 ± 6.39). They were (5) smokers and (5) non smokers.

Serum calcitonin was measured by radioimmunoassay. The value of serum calcitonin obtained in the healthy subjects was (32.9 ± 9.19 pg/ml.).

In the patients with bronchogenic carcinoma, serum calcitonin value was (49.85 ± 20.25 pg/ml.). This value was higher than in the control group, and the difference was statistically highly significant ($P < 0.01$).

The serum calcitonin concentration in the three different pathological types in the series was different. It was higher in small - cell type (69 ± 25.12 pg/ml.) than in adenocarcinoma type (44.6 ± 13.32 pg/ml.), and the difference was statistically significant ($P < 0.05$). The level in squamous cell type (40 ± 9.43 pg/ml.) was lower than that of the adenocarcinoma, but the difference was statistically insignificant ($P > 0.2$).

Serum calcium was measured by colorimetric determination, where it was found in healthy subjects to be (7.99 ± 0.91 mg%). In patients with bronchogenic carcinoma, it was (10.06 ± 2.08mg%). The difference was found to be statistically highly significant ($P < 0.005$).

As regards to pathological types in the series, serum calcium in the squamous cell type was (10.8 ± 2.11 mg %) higher

than that of the adenocarcinoma type (9.56 ± 1.68 mg %). The difference was statistically insignificant ($P > 0.1$). The value in small cell type was (9.36 ± 2.28 mg %), lower than that of the adenocarcinoma type, the difference statistically was insignificant ($P > 0.4$). As regard to the bone metastasis in the different pathological types in this study, serum calcium value in non metastatic group with squamous-cell carcinoma was (10.86 ± 2.27 mg%) higher than the value in the metastatic group (10.6 ± 2.06 mg%) the difference was statistically highly significant compared with the control ($P < .005$). In small-cell type, the serum calcium value in metastatic group was (10 ± 2.60 mg%), higher than the non metastatic group (8.1 ± 0.99 mg%), compared with control the difference was significant ($p < .025$). In adenocarcinoma, the value in non metastatic group was (10.35 ± 0.77 mg%) higher than in the metastatic groups (9.3 ± 2.08). The difference was statistically highly significant with control ($P > .005$).

Certain conclusions may be deduced from the study:

1. Serum calcitonin was highly significantly increased in patients with bronchogenic carcinoma.

2. The increase in serum calcitonin in patients with bronchogenic carcinoma varies in the different types of bronchogenic carcinoma, and in this study it was found to be highest in the patients with small cell carcinoma.

3. Serum calcium was highly significantly increased in patients with bronchogenic carcinoma, and in this study, it was highest in patients with squamous cell carcinoma.

Some recommendations may be put forward:

1. As the study was only a preliminary report of the possible value of serum calcitonin and calcium in bronchogenic carcinoma, a wider study including a larger number of cases is necessary.

2. Comparing the values of serum calcitonin and calcium before and after treatment of the bronchogenic carcinoma.

3. Increased serum calcium in non-metastatic types of bronchogenic carcinoma, requires report about possible value of serum parathyroid hormone.