“Role of High Resolution Computed Tomography in the Diagnosis of Active Pulmonary Tuberculosis”

Summary
The present work included 30 patients with active pulmonary tuberculosis. They were 22 males and 8 females. Their ages ranged between 32 to 65 years. The sample was divided into 15 patients with AFB positive and 15 patients with AFB negative.

The main aim of the study were to: determine the activity of the disease based on HRCT findings, define indications for the use of HRCT in evaluation of active pulmonary TB and determine whether additional information provided by HRCT alters clinical management of the disease.

All patients were examined with plain chest X-ray. All patients were examined with HRCT (Siemens Somatom, sensation 16) without using intravenous contrast. The scan parameters used were 120 KVP and 400 mA per slice and slice thickness 1.25 mm.

Cough and sputum were the common complaint encountered in 30 (100%) and 23 (76.7%) patients respectively. Fever was encountered in 17 (56.7%). However, weight loss was encountered in 15 (50%), night sweating in 10 (33.3%) and haemoptysis in 8 (26.7%) were also encountered.

Chest radiographic findings in active tuberculosis were poorly defined opacities in 15 (50%) out of thirty patients. Cavitary lesions 10 (33.3%), out of thirty patients, consolidation 10 (33.3%) out of thirty patients. 91
HRCT showed evidences of active tuberculosis in 27 patients from 30 patients; 14 (93.3%) patients out of 15 patients with AFB+ve and 13 (86.3%) out of 15 patients with AFB-ve. Thus total 27 (90%) patients had evidence of active pulmonary tuberculosis on HRCT.

In AFB positive group, findings consistent with active pulmonary tuberculosis were bronchogenic spread [centrilobular nodules in 12 (80%) patients, "tree-in-bud appearance" in 12 (80%) patients and poorly defined nodules in 8 (53.3%) patients]. Other findings of active pulmonary tuberculosis presence of cavitory lesions in 13 (86.3%) patients. Consolidations in 10 (66.7%) patients.

In AFB negative group, findings consistent with active pulmonary tuberculosis were bronchogenic spread [centrilobular nodules in 8 (53.3%) patients, tree-in-bud appearance in 9 (60%) patients and poorly defined nodules in 9 (60%) patients]. Other findings of active pulmonary tuberculosis presence of cavitory lesions in 8 (53.3%) patients, and consolidation in 9 (60%) patients.

Other findings in the whole sample with less percentage were pleural fusion, septal wall thickening, emphysematous changes, traction bronchialcasis, fibrosis, randomly diffuse nodules, lymph node enlargement and pneumothorax.

In this study, the findings of active pulmonary tuberculosis in AFB+ve group encountered with high percentage than the same findings in AFB-ve group.