SUMMARY

The aim of the study was to evaluate the diagnostic reliability of glutaraldehyde test as a rapid and easy test for diagnosis of pulmonary tuberculosis.

This study included four groups:-

Group I: included (350) patients ; 226 males 124 females. The mean age was 34.3 years. All patients were newly diagnosed pulmonary tuberculosis with positive sputum for acid fast bacilli and just before starting the antituberculous treatment.

Group II: included (50) patients with respiratory diseases other than pulmonary tuberculosis.

Group III: included (50) patients with non respiratory diseases.

Group IV: included (50) apparently healthy persons.

All patients were subjected to a full history taking, complete clinical examination, plain chest x-xay (postero anterior, lateral views), tuberculin test (Mantoux method), sputum examination for acid fast bacilli (Ziehl Neelsen stain), complete blood picture and erythrocyte

sedimentation rate (ESR).

Glutaraldehyde test was done for all subjects by adding 1 ml of whole blood with anticoagulant EDTA in glass haemolysis tube and gently mixed. The coagulation was then observed every minute for 20 minutes by tilting the tube. In positive cases blood glutaraldehyde gelification takes place in 10 minutes or less.

Glutaraldehyde test was positive in 289 cases (82.6%) in the tuberculous group (group I) 5 cases (10%) in group II, 8 cases (16%) in group III and all cases of healthy group (group IV) were negative for G.T.

Mean time of positive glutaraldehyde test in group I was 5.5 ± 2.9 minutes, in group II was 6 ± 2.1 minutes and in group III it it was 3.9 ± 2.4 minutes. There was non significant e between between mean times of the three groups (p > 0.05).

In the tuberculous group there were 276 cases (78.9%) positive for glutaraldehyde test and tuberculin test , 6 cases (17%) were negative for both tests, 13 cases (3.7%) were positive for glutaraldehyde test but negative for tuberculin test and 55 cases (15.7%) were negative for G.T but positive for tuberculin test. There

was less than moderate correlation between glutaraldehyde test and tuberculin test (association coefficient 0.4).

The correlation between the results of G.T and ESR in the tuberculous group was statistically significant $(r=0.49, p<0.01)$. In the tuberculous patients, there were 59 cases (16.8%) with minimal lesions of which 45 cases (76.3%) gave positive G.T and 14 case (33.7%) gave negative G.T. Moderatly advanced lesions were observed in 176 cases (50.3%) of which 152 cases (86.4%) gave pesitive G.T and 24 cases(13.6%) gave negative G.T. Far advaned lesions were observed in 115 cases (32.9%) of which 92 cases (80%) gave positive G.T. and 23 cases (20%) gave negative G.T. There was very weak correlation between results of G.T and x-ray finding (Contigency coefficient =0.1).

Regarding the accuracy of glutaraldehyde test in the diagnosis of pulmonary tuberculosis, it was found that the sensitivity was 91.3%, the positive predictive value was 95.7%, the negative predictive value was 69.2 % and the efficiency of the glutaraldehyde test was 85.5 %.