SUMMARY AND CONCLUSION

This study was aimed at evaluate the adverse reaction of antituberculosis drugs on tuberculous patients under treatment and detect their effect on kidney function e.g uric acid and creatinine.

The study included one hundred patients have pulmonary tuberculosis and thirty healthy control subjects. The patients were either admitted in the chest clinic or in chest Abbassia Hospital.

Every sputum specimen was subjected to several bacteriological examination which were direct smear staining with Zeihl-Neelsen, digestion-decontamination procedure was done to every sputum specimen using petroff ʾs sodium hydroxide (NaOH) method, then after processing, and culture on lowenstein-jensen media was done from the sediment that resulted after the digestion-decontamination method. All cultures were incubated at 37 ºC up to eight weeks .

The numbers isolated strains of mycobacteria that were isolated from the 100 patients who have pulmonary tuberculosis were 76 strains (76%). the isolated strain were subjected to different biochemical reaction tests to identify the mycobacteia into species rate of growth , pigment production , niacin test, nitrate reduction, also, 76, strain were subjected to anti-tuberculous susceptibility test by using proportion method with isoniazid, streptomycin, rifampin and ethambutol. Then the patients subjected to certain biochemical study including the measurment of plasma urate and creatinine as both of the main kidneys function test.

In our study, the following results were obtained:

- The sensitivity of AFB smears 86.0 with specification 85%.
- The 76% positive cultures that were identified results in 72 (94.6%) were *M . tuberculosis* and 4 were atypical *M . tuberculosis*.
- There are increase in the resistance of the strain to INH, Rifampin (28.9%), those patients called MDR (28.9 %).
- The incidence of *M. tuberculosis* disease is high in age 30-40 years old (56.1%) out of 57 patient included in this age in our study.
- The mean uric acid after 2, 4 months respectively, 5.2124 mg/dl and become 6.600 mg/dl with no change in creatinine level in patients treated with first line antituberculous drugs.
- The mean uric acid in chronic patients after 2, 4 months 5.74 mg/dl and become 8.206 mg/dl but in fresh patients the main uric acid after 2 months, 4 months (4.44 mg/dl) and become (5.88 mg/dl).
- In conclusion, this study showed that the antituberculous drugs first line drugs has a great effect on uric acid level by cause hyper uricaemia, that make an increase in plasma urate level during the chemotherapy regimens, and also, showed no effect on creatinine level either in chronic or recent patients.

RECOMMENDATION

Our study showed that the digestion-decontamination techniques which was done for sputum specimen is sensitive rapid, not expensive, easy to perform and used for the initial diagnosis of mycobacteria. Thus the digestion-decomination method is recommended.

Culture of mycobacteria are highly recommended as the cultural procedures are believed to be more sensitive than the microscopic examination for the detection of mycobacteria, as its advantage is obvious in cases where specimen contains small amountof tubercle bacilli, and for the isolation of tubercle bacilli for further identification into species and for the performance of drug susceptibility tests.

Drug susceptibility tests should be performed routinely on cultures obtained from patients who have not previously received anti-tuberculous drugs or who have a history of previous chemotherapy, as these patients depend to large extent on the likelihood that they are harboring resistant strains, the proportional method is recommended to be used for antituberculous susceptibility test as this method obviate many problems such as; instability of drugs and difficulty of preparing quality media.

Further studies on mycobacteria are needed using the recent techniques for the rapid diagnosis and rapid identification of mycobacteria: non-isotopic and isotopic nucleic acid probes, chromatographic analysis of mycobacterial cell wall lipids (GLC), polymerase chain reaction (PCR) and the BACTEC 460 TB system.

Chest physician must take in their consideration to give the pulmonary tuberculosis patient under treatment certain drugs that can be suppress the gradually increasing the serum-uric acid like allopurinol and colchicines to prevent patient from arthritis disease like gout.

Vaccination (active immunization against tuberculosis) must be administered to all children (BCG) to avoid any infection with tuberculosis.

Nutrition for patients must be take a great major consideration in treatment of patient with tuberculosis besides the other drugs.