Summary and Conclusion

Typhoid fever is a world- wide disease in distribution particularly throughout the tropics. In Egypt , inspite of improvement of socio-enviromental condition of the population and the extensive network of health services, yet enteric fever is more or less endemic.

The definitive diagnosis of the disease requires the isolation of salmonella typhi from blood , faeces , urine or other body fluids. Diagnosis depends on clinical picture of the disease and detection of agglutinating antibodies to S. typhi " Widal test " . There is serious doubts on the value of the Widal test in diagnosis of typhoid fever especially in endemic areas , where the antibody titre of normal population are often not known , so the diagnosis of typhoid fever by Widal test alone is prone to error , so alternative methods for diagnosis of typhoid fever are encouraged .

This study is aimed at the assessment of adenosine deaminase activity in febrile patients to determine its usefulness in the early diagnosis of typhoid fever. From this aim, our study is performed on 174 selected children, in Abbassia fever Hospital , Embaba fever Hospital , El-Monira General Hospital and EL- Moneeb Chest Hospital.

The children were divided into 3 groups Group (I) : typhoid cases group (II): other group of fevers including viral hepatitis A(24 cases), meningitis(16 cases), T. B.(12 cases) and measles(22 cases), the group (III) (control group) is formed of 50 healthy children. Group (I) : is diagnosed by clinical picture , positive Widal test, blood culture and CBC, group (II) : include : viral hepatitis A "which is diagnosed by clinical picture ,

abnormal liver function tests and positive immunological tests. Clinical picture, C.S.F. culture and CBC diagnose meningitis. T. B. is diagnosed by clinical picture, tuberclin test, chest x-ray and sputum culture but measles is diagnosed mainly by clinical picture. Group (III) : children are clinically free (healthy children).

Mean serum ADA level was measured in all groups .

The results, of this study revealed that typhoid fever cases are presenting with **symptoms** (fever 100% headache 90%, abdominal pain 82%, dry cough 66%, constipation 60%, diarrhea 38%, and vomiting 34%) and **signs** (coated tongue 90%, tympanitic abdomen 76%, toxic facies 70%, sore throat 66% , splenomegaly 40% , wheezy chest 36% , hepatomegaly 20%, and rose spots 8%) and **leucopenia** in 62% of cases.

We found that the serum ADA level is significantly increased in typhoid cases (group I) either at admission or on discharge in comparison with control group and the cases of other fevers (group II).

The increase of ADA activity in typhoid cases started at admission and this activity decreased to obvious extent on discharge after about 3-4 weeks of treatment .

In this study we found that the ADA activity is influenced by the treatment.

Also, we found that the mean level of ADA in complicated typhoid cases less than the un-complicated typhoid cases with high significant value either at admission or on discharge .

Also, this study , revealed that there is no significant difference between any fever and others rather than typhoid , but there is high

significant difference between all of them in comparison with controls as regard ADA level.

In this study we found that sensitivity of ADA in typhoid cases is 92% and specificity is 100% when we considered 80 U/L as cut – off for ADA level.

From this study we concluded , that ADA estimation can be used as an early diagnosis of typhoid fever especially during first week of illness when Widal test is negative and its level has a prognostic value in typhoid cases.