SUMMARY

Meningitis is still one of the major serious diseases in children in Egypt.

- Early detection of central nervous system infections is essential in order to iniate appropriate therapy.
- The aim of the present study is to evaluate lipids changes including cholesterol, low density lipoprotein, high density lipoprotein and triglycride that may occur in meningitis during the course of the disease and also to evaluate cortisol changes and thyroid hormones (T_3, T_4, TSH) changes during the course of meningitis and to differentiate between septic, aseptic and tuberculous meningitis.

For this purpose, 62 patients were chosen from Benha Fever Hospital during the period from march to December 1995. They were subjected to physical and neurological examination. Lumber puncture was done and CSF was collected and examined bacteriologically, cytologically and biochemically in addition to serum measurement of cholesterol, triglycride, low density, and high density lipoproteins and measurement of serum level of cortisol and thyroid hormones on admission (prior to any treatment) and after cure. There were 16 children completely free conserved as controls. According to the results of CSF examination the patients were classified into 3 groups: acute septic meningitis (35) aseptic meningitis (19) and tuberculous meningitis (8 patients).

Fever, headache, vomiting, impaired level of consciousness and neck rigidity were the most frequently encountered manifestations in all types of meningitis in the septic group, 13 patients had a history of antibiotic administration before admission and so their cultures were negative (34%). In the other patients 22 patients (66%) the most common organism was staphylococci in 8 patients (22.8%) followed by gram-ve bacilli in 7 patients (20%), pnumococci in 4 patients (11.4%), streptococci in 2 patients (5.7%) and meningococci in 2 patients (5.7%).

Serum lipids showed variable changes in our patients where triglycride showed marked elevation in all groups and was markedly elevated in septic group. Also,cholesterol and LDL show moderate elevation in all groups of meningitis but HDL showed no significant changes in any group of meningitis.

Serum cortisol showed marked elevation in all groups of meningitis.

No significant changes were observed in thyroid hormones in the course of the disease in all groups. In conclusion; menigitis has a profound effect on various body systems. Their effects on metabolic and endocrinal systems may lead to development of serious sequelae of the infectious process.