INTRODUCTION

Convulsions in connection with febrile illness during childhood are a rather common phenomenon from 2 – 5 % of all children will experience febrile convulsions before the age of 6 years **(kiviranta and airaksinen 1995)**.

Febrile convulsions present the most common problem in pediatric neurology. How serious are they for the child ? Opinions have changed with time. **Lennox (1949)** wrote that "febrile convulsions may cause brain pathology as evidenced by transient or permanent neurological deficit". In contrast to **Robinson (1991)** who referred to children with febrile convulsions as having a 'generally excellent prognosis.'

Why has there been this change in opinion? One reason is that earlier reports of the relatively poor prognosis of children with more severe problems attending specialized clinics or hospital have been balanced by the more optimistic findings of population based studies of less selected groups of children. Another reason is that the results of studies depend on the way febrile convulsions are defined ??some researchers have included children with underlying meningitis or encephalitis in their studies of febrile convulsions **(Nakayama and Arinami, 2006)**.

A family history of convulsions, maternal smoking and alcohol consumption during pregnancy have been associated with febrile seizures, but the risk factors remain largely unknown **(Cassano et al., 1990)**.

However several theories, such as relative vitamin B6 deficiency, electrolyte disturbances, reduction of serum as well as CSF zinc levels and low level Gamma amino-butyric acid (GABA) has been proposed. Among these, low GABA in CSF and low zinc in both serum and CSF has drawn much attention. Convulsions are a horrific experience by the parents and moreover one episode

of convulsion leads to the damage of several thousands neurons **(Singh RR et al., 2009)**.

FCs is to be distinguished from epilepsy, which is characterized by recurrent non-FC **(Akman CI, 2010).**

Some children have a chronic seizure disorder with more seizures during fever. These are not febrile seizures, but are referred to as seizures with fever **(Allen JE et al., 2007).**

Aim of the Work

The aim of this prospective study is to see the relationship between low serum zinc levels and febrile seizures exists in Egyptian children comparing them with neurologically free children with fever .