

Furthermore, magnesium deficiency is linked to the development of type II diabetes mellitus, to the severity of the disease and to the deterioration of renal function. Moreover, hypomagnesemia correction using dietary magnesium supplement is approved to improve glucose handling and insulin response in elderly patients with type II diabetes mellitus. Owing to these facts, several investigators have addressed the topic of magnesium status and dietary magnesium intake, especially in diabetes mellitus (Rude, 1998; Geiger & Wanner, 2012; Gonzalez *et al.*, 2013).

### **1.12 .Magnesium and pre-eclampsia/eclampsia**

Historically, it was approved that the occurrence of convulsions during pregnancy is associated with poor prognosis as eclampsia which was thought to be a simple convulsive disorder was associated with a 50% maternal mortality rate in early days (Roy *et al.*, 2013; Jafrin *et al.*, 2014).

After that, specifically during the 19<sup>th</sup> century, an association between eclampsia, albuminuria and hypertension was noted, leading to an earlier diagnosis of the condition during the last century. Furthermore, seizure in eclampsia was distinguished from other types of seizures by the absence of past history of convulsions before pregnancy (Geiger & Wanner, 2012; van Dijk *et al.*, 2013).

Pre-eclampsia is defined as a condition with a triad of hypertension, proteinuria, and pathologicaledeema. Statistically, pre-eclampsia occurs in about 6-8% of gestations above 20 weeks and is more commonly seen in nulliparous women and is known to regress rapidly postpartum. Pathophysiologically, pre-eclampsia is characterized by