heamoconcentration and vasoconstriction causing increased systemic peripheral resistance and reduction in cardiac output and plasma volume.

The cause behind these changes is the shift in balance of thromboxane/prostacyclin caused by a decrement in prostacyclins synthesis which are potent vasodilators and inhibitors of platelets aggregation. Therefore, the disturbance in prostacylin/thromboxane ratio might end-up favoring vasoconstriction and platelet aggregation causing the pathophysiological changes of the disorder. Additionally, pre-eclampsia is associated with glomerular lesions causing protienuria commonly seen in affected women. Furthermore, circulating angiogenic factors such as growth factor type one receptor, also known as Fms-like tyrosine kinase 1 (sFlt 1) are suggested to be contributors to this disorder development (Roy *et al*., 2013; Jafrin *et al*., 2014).

1.13 Magnesium and cardiovascular diseases

More and more studies are conducted to study the effect of magnesium in cardiovascular system showing increasing evidence that magnesium status is important in the pathogenisis, prevention and treatment of cardiovascular disorders. The role of magnesium in cardiovascular system is explained by the essential role of magnesium in activating ATP which is essential for normal cell membrane function and is the energy source for Na-K ATPase pump (Rude, 1998; Geiger & Wanner, 2012; Qu *et al.*, 2013).

Earlier studies conducted on animals showed a relationship between low magnesium intake and high blood pressure (Joffres *et al*., 1987). Furthermore, other studies showed a linkage between low magnesium levels and atherosclerosis. (Joffres *et al*., 1987).