INTRODUCTION

The incidence of preterm labour is about 5 - 10 % of all births (Lamont and Fisk 1993). The precise cause or causes of preterm labour is still unproven (Cunningham et al., 1993).

Spontaneous rupture of membranes (S.R.O.M) commonly coincides with the onset of labour, it precedes labour by a latent interval of at least several hours in about 10 % of term pregnancies (Mead,1980).

Prelabour (S.R.O.M) complicates 15 - 40 % of preterm labour and it is still one of the major causes of prematurity. If it happen before term it can lead to a higher incidence of fetal morbidity and mortality (Lamont and Fisk, 1993).

The concentration of maternal serum calcium declines during pregnancy. The cause and pattern of such decline are uncertain (Pitkin et al., 1979). Calcium supplementation may significantly reduce preterm delivery in high risk population (Pepke, 1991).

Pregnancy is marked by a state of hypomagnesaemia. The serum Mg level shows no gestational dependance until 33 weeks at which it continueously declines. Hypomagnesaemia may be a marker for true preterm labour (Kurzel, 1991).

Spatling (1988), reported significantly lowered preterm labours with magnesium supplementation during pregnancy. On the other hand Pepke (1991) using oral magnesium and Cox et al., (1990) using magnesium sulphate infusion reported that these preparations were ineffective in prevention of preterm labour.

Kidroni et al., (1989) reported a significant lowered fetal membrane calcium and magnesium concentrations in cases of prelabour (S.R.O.M) that may be of relevance to the pathogenesis of this disorder.

Plasma zinc levels fall off in women in late pregnancy Bogden et al., (1978). Women with low zinc intake are associated with three fold increase in the risk of low birth weight and the risk of preterm labour (Schholl et al., 1993).

Copper is essential for maturation of elastin and collagen responsible for integrity of the fetal membranes (Artal et al., 1974). In normal pregnancy the serum copper level shows an increase depending upon the time of gestation (Bogden et al., 1978). The serum copper level in prelabour (S.R.O.M) was significantly lower than that reported in pregnant controls (Fu, 1989).