

Role of Serum Trace Elements between Pre-eclamptic Women and Healthy Pregnant Women

Khin Moe Aung, Aung Kyaw Kyaw, Saw Myat Thwe, Myitzu Tin Oung, Than Lwin, Yu Yu Aung, Zin Mon Kay Khine Win, **Tin Tin Thein**, Khin Htar Yi

Programme & Abstract, Mandalay Medical Conference, Myanmar Medical Association, 2011.

Abstract

Pre-eclampsia is a leading cause of maternal mortality and morbidity. This hospital and laboratory-based case control study was conducted at Department of Medical Research (Upper Myanmar) and Central Women's Hospital, Mandalay during the period September to February 2011. The purpose of this study is to find out the role of serum trace elements in the diagnosis of pre-eclampsia. Fifty pre-eclamptic cases (25 cases were mild and the rests were severe diseases) and fifty apparently healthy pregnant women attending to the ante-natal clinic and obstetrics wards were enrolled and systematic sampling procedure was used in this study. Diagnosis and severity of disease was classified according to American College of Obstetrician and Gynaecologist (ACOG) guideline. The serum trace elements levels were determined by Atomic Absorption Spectrophotometer. Serum magnesium and zinc levels in normal, mild and severe patients were **34.38 ± 8.28 mg/L, 35.40 ± 11.55 mg/L, 35.79 ± 11.34 mg/L and 0.57 ± 0.14 mg/L, 0.63 ± 0.14 mg/L, 0.63 ± 0.17 mg/L** respectively. There was no significant differences in mean serum magnesium and zinc level between normal and both types of pre-eclampsia ($p > 0.05$). Areas under the receiver operating characteristics curve (ROC Curve) for serum magnesium and zinc were 0.43 and 0.37 and so these markers did not reach to the acceptable limit for applying as the diagnostic test. In conclusion, more future studies are needed to explore the role of the serum trace elements levels as one of the diagnostic tools of pre-eclampsia and its complications in clinical practice.