

The interrelations of serum Mg, Ca, Ca/Mg ratio with serum lipids on rural women in Korea

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The purpose of this study was to investigate the correlations among serum lipids, lipoproteins and serum Mg, Ca, Ca/Mg ratio concerned with CHD in Korean rural 79 young women according to the body mass index.

1. The average body weight and height of the subjects were 55.88kg and 158.54cm, respectively. The mean percent ideal body weight(PIBW) and body mass index(BMI) were 105.47%, 22.62kg/m², respectively. There was a significant increase in weight, PIBW in subjects as their BMI increase(p<0.05).

2. The mean values of serum total cholesterol, HDL-cholesterol/total cholesterol ratio, LDL-cholesterol/HDL-cholesterol ratio(LPH), total cholesterol/HDL-cholesterol ratio(TPH) and the atherogenic index(AI) were 167.00, 128.62, 57.09, 83.84mg/dl, 0.35, 1.54, 3.01 and 2.01, respectively. There were no significant differences among serum lipids, lipoproteins and weight. There were significant difference in LDL-cholesterol, HDL-cholesterol/total cholesterol, LPH, TPH and AI in subjects as their PIBW(P<0.01). And there were significant difference in serum LDL-cholesterol(p<0.05), HDL-cholesterol/total cholesterol ratio(p<0.05), LPH(p<0.01), TPH(p<0.01) and AI(P<0.01) in subjects as their BMI.

3. The mean serum Mg, Ca, Ca/Mg ratio were 2.20, 8.54mg/dl, and 3.95, respectively. There were no significant difference among anthropometric assessments, serum lipids included lipoproteins, and serum minerals. Even though there were no significant differences between serum lipids and serum Mg and Ca, there were decrease trends in serum lipids according to serum Mg increase and Ca decrease.

This study was limited within serum levels of minerals(serum Mg and Ca), serum lipids and lipoproteins concerned with CHD, therefore I hope there will be wider efforts to consider about the dietary levels of minerals for presentation of the connection between dietary Mg, Ca and serum lipids.◎

Key words; serum lipids, serum lipoprotein, serum Mg, Ca, Ca/Mg ratio