MICRONUTRIENT STATUS IN PREGNANT WOMEN WITH EARLY PREGNANCY LOSS

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Relevance: *Loss of reproductive potential leading to irreversible consequences for population size is currently considered as a unified syndrome of fetal loss. At present, the most common complication of pregnancy is spontaneous miscarriage, the frequency of which accounts for 10–20% of all clinically recognized pregnancies. Despite undeniable scientific and organizational achievements of maternal and child health services, this indicator shows no tendency toward reduction. Therefore, detailed analysis of risk factors, as well as preconception preparation and elimination of etiological factors, remains one of the key tasks aimed at reducing early pregnancy losses.*

Objective: *The aim of the study was to assess the serum levels of micronutrients in women with a history of spontaneous miscarriage.*

Materials and Methods

To achieve the objective, two clinical groups were formed: Group I – patients with sporadic spontaneous miscarriage (SSM); Group II – 30 pregnant women with recurrent pregnancy loss (RPL). The control group included 10 patients with a progressing physiological pregnancy.

Serum levels of the following nutrients were assessed in women with pregnancy loss: zinc, copper, magnesium, and phosphate ions.

Results and Discussion

The analysis showed that only two patients with spontaneous miscarriage (3.3%) had all studied micronutrient levels within the normal range.

Notably, the most significant decrease in indicators was observed in the group of women with sporadic spontaneous miscarriage. In Group I, statistically significant differences in serum magnesium ion levels were identified compared with the control group ($p=0.041$). It is concerning that 100% of women with a single episode of SSM and 60% of women with recurrent pregnancy loss had a deficiency of one or more nutrients ($p<0.001$).

The obtained data indicate that in Group I, compared with the control group, the proportion of women with hypomagnesemia was significantly higher (48.8±2.4% vs 23.3±2.8%; $p=0.05$). The proportion of women with hypophosphatemia was also higher compared with Group II (48.8±2.4% vs 20.0±2.4%; $p=0.05$). The micronutrient status of patients with recurrent pregnancy loss was comparable to that of the control group.

A decrease in all studied parameters was observed in 5 women in Group I (16.7%), in 2 women with recurrent pregnancy loss (6.7%, $p=0.955$), and in 1 woman in the control group (1%, $p=0.522$ compared with Group I and $p=0.915$ compared with Group II).

Conclusions

Thus, the most pronounced micronutrient deficiency was identified in women with sporadic spontaneous miscarriage compared with those with recurrent pregnancy loss.

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