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Short communication

Antepartum/postpartum depressive symptoms and serum zinc and magnesium levels

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Abstract:
In the present study, we investigated the relationship between depressive symptoms and serum zinc and magnesium level in antepartum and postpartum women. All women received standard vitamin, zinc and magnesium supplementation. Sixty-six pregnant women in the Czerwiakowski Hospital in Kraków were assessed for prepartum depressive symptoms using the Beck Depression Inventory (BDI). Sixty-two and fifty-eight women were also assessed for postpartum depressive symptoms (using Edinburgh Postnatal Depression Rating Scale, EPDRS) at 3 and 30 days after delivery, respectively. Serum zinc and magnesium levels were also determined at these time points, however, the number of examined subjects were diminished. A significantly higher EPDRS score (by 45%), indicating severity of depressive symptoms, was found on the 3rd day after childbirth compared with the 30th postpartum day. Moreover, the early post-delivery period (3rd day) was characterized by a 24% lower serum zinc concentration than that found on the 30th day after childbirth. BDI scores assessed a month before childbirth revealed mild depressive symptoms, which was accompanied by a serum zinc concentration similar to that found on the 3rd day after delivery. No significant alterations were found in the magnesium levels between these time points. The present results demonstrated a relationship between severity of depressive symptoms and decreased serum zinc (but not magnesium) concentration in a very specific type of affective disorder, the postpartum depression.

Key words:
antepartum, postpartum, depression, serum, zinc, magnesium