The evaluation of Nesfatin-1 levels in patients with and without intrauterine growth restriction

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Objective
To evaluate Nesfatin-1 levels in patients with and without intrauterine growth restriction and to analyze the correlation between Nesfatin-1 levels and fetal birth weights.

Methods
The study comprised a total of 81 cases; 41 patients with IUGR and 40 healthy cases. Demographic data, pregnancy weeks, fetal birth weights and Nesfatin-1 levels were all recorded. The Nesfatin-1 levels were compared between the groups and the correlation between fetal birth weights and Nesfatin-1 levels was analyzed.

Results
No statistical significant difference was determined between the groups in terms of demographic data (p > 0.05). Average birth weights were determined as 3420 ± 259 gr in the control group and 2041 ± 350 gr in the IUGR group, which was found to be statistically unequal (p = 0.001). The average Nesfatin levels in the control group were 0.069 ± 0.011, and 0.094 ± 0.042 in the IUGR group. This difference was statistically unequal (p=0.001). While no correlation was determined between Nesfatin levels and fetal birthweights in the control group (r = -0.34 vs p = 0.836), in the IUGR group and when all the cases were evaluated together, a statistically moderately significant negative correlation was determined (r = -0.469, p = 0.002 and r = -0.251, p = 0.024 respectively).

Conclusion
Although intrauterine growth is a multifactorial process, the effect mechanism has not yet been established. The results of this study offer some indications about the possible effect of Nesfatin 1 on fetal growth.