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Original article

Proteinuria as the Most Relevant Parameter Affecting Fetuin-A Levels in Preeclampsia

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SUMMARY

The present study aimed to examine the factors affecting the possible changes in serum fetuin-A in patients with preeclampsia (PE). The examined factors included the parameters of insulin resistance (IR) [(insulin sensitivity (HOMA%S), insulin resistance (HOMA2IR), and beta-cell functions (HOMA%B)], which were calculated using the HOMA2 calculator, and total and ionized calcium and magnesium levels.

Sixty PE patients and thirty healthy pregnant women, which comprised the study group and control group, respectively participated in the present study. Fetuin-A, estradiol, insulin, glucose, total and ionized calcium and magnesium, total protein, albumin, and globulins were measured in their sera.

The results of the present study showed that serum total and ionized magnesium and the I.Ca/Mg ratio decreased in PE women. Although the fasting insulin level and HOMA2IR were higher and HOMA2%S was lower in PE compared with the control women, PE did not appear as an overt insulin-resistant state. Serum fetuin-A was low in PE patients compared with the control group because PE women had proteinuria. Fetuin-A levels were not correlated with the characteristics and IR parameters, cations, and estradiol levels, but it was correlated with the severity of proteinuria.

These results confirmed the hypothesis that proteinuria results in the loss of fetuin-A because it has a low molecular weight.

Key words: **fetuin-A, insulin resistance, preeclampsia, magnesium, calcium**

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