ABSTRACT

Alak S. Evaluation of the Relationship Between Prolactin Level and Nutritional and Metabolic Parameters in Patients Taking Dopamine Agonists. Istanbul University Institute of Health Sciences, Department of Nutrition. Master's Thesis. Istanbul. 2026.

Objective: To compare the nutritional, anthropometric, and metabolic characteristics of prolactinoma patients receiving dopamine agonist therapy with low versus normal–mildly elevated prolactin (PRL) levels.

Materials and Methods: This retrospective cross-sectional study included 61 patients (33 women and 28 men). Participants were categorized into two groups: Low PRL (women ≤7 ng/mL, men ≤5 ng/mL; n=18) and Normal–Mildly Elevated PRL (n=43). Anthropometric measurements, body composition analyses, dietary intake assessments, and biochemical evaluations were performed. Physical activity and eating disorder risk were assessed using the International Physical Activity Questionnaire–Short Form (IPAQ-SF) and the Eating Disorder Examination Questionnaire-13 (EDE-Q-13), respectively.

Results: Patients with low PRL levels had significantly lower HDL-cholesterol concentrations ($p=0.035$), whereas no significant differences were observed in BMI, body composition, or other biochemical parameters. Logistic regression analyses indicated that hypoprolactinemia was not an independent predictor of metabolic syndrome ($p>0.05$). In sex-specific analyses, women in the normal–mildly elevated PRL group exhibited significantly higher BMI ($p=0.042$), waist circumference ($p=0.027$), muscle mass ($p=0.011$), and fat mass ($p=0.006$), along with higher physical activity levels ($p=0.013$) and greater body shape/weight concerns ($p=0.047$). They also had a lower cumulative cabergoline dose ($p=0.031$). No significant differences were observed between PRL groups in men.

Conclusion: Hypoprolactinemia was associated with lower HDL-cholesterol levels but was not an independent risk factor for metabolic syndrome. The observed differences among women suggest that hypoprolactinemia may exert sex-specific behavioral effects beyond its metabolic consequences.

Key Words: Prolactin, Prolactinoma, Hypoprolactinaemia, Hyperprolactinemia, Dopamine agonist.