



HIGH MEAN PLATELET VOLUME IN PROLACTINOMA TREATED WITH CABERGOLINE

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Introduction

Mean platelet volume (MPV) is a new important indicator of platelet activity in atherosclerosis. Elevated MPV is associated with the presence of more metabolically active platelets. The aim of our study is to evaluate whether change of MPV value is associated with cabergoline treatment in patients with prolactinoma.

Method

Thirty patients with prolactinoma (mean age 33.4 ± 8.5 years and body mass index (BMI): 28.1 ± 7.8 kg/m²), and 30 age- and BMI matched healthy control subjects (mean age 31.0 ± 7.0 years; BMI: 25.2 ± 2.9 kg/m²) were recruited in our study. Cumulative cabergoline (CCD) dose was calculated. The MPV value was evaluated before and after cabergoline therapy and was compared to control group. Anthropometric measurements were performed. Patients have hematological and other endocrinologic diseases including diabetes mellitus were excluded from the study.

All complete blood count, biochemical and hormonal analysis were performed by automatic analyzer.

Results

According to our findings, serum prolactin levels in prolactinoma before and after the cabergoline treatment were significantly different (128.0 ± 99.7 vs 35.5 ± 39.5 ng/ml, $p=0.0001$, respectively). Mean cumulative cabergoline dose were calculated as 218.1 ± 252.5 mg. We found that the mean pre-treatment MPV values in prolactinoma group were lower than post-treatment MPV values (8.9 ± 0.8 and 9.6 ± 0.8 fL, $p=0.0001$, respectively) and lower than control group (8.9 ± 0.8 and 9.8 ± 0.9 fL, $p=0.0001$, respectively). There was no correlation both between post-treatment MPV and CCD. Moreover, there were not any relationships between MPV and both prolactin levels before and after the treatment.

Conclusions

The cabergoline treatment in prolactinoma may relate high MPV value independent to cumulative cabergoline dose and prolactin levels. On the contrary our finding, Tamm AA et al. demonstrated no significant changes in platelet count and MPV values in newly diagnosed prolactinoma patients compared to control subjects and there was no significant difference in platelet count and MPV values after 6 months of treatment with cabergoline. However, according to knowledge, prolactin receptor expression was found in thymus, bone marrow, and peripheral blood mononuclear cells. The future study need to clarify this increment of MPV during low dose cabergoline therapy.

