Different cabergoline effect on visceral adiposity index (VAI) in female prolactinoma patients versus idiopathic hyperprolactinemia patients

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Background/objectives: Hyperprolactinemia can lead to unfavorable changes in body fat composition, lipid and metabolic abnormalities. Reversibility of these change after normalization of prolactin levels with dopamine agonists are still controversial, some studies had reported favorable changes. While, other studies denied those effects. We aimed to compare metabolic and anthropometric profile in female patients with newly diagnosed prolactinoma versus newly diagnosed female patients with idiopathic hyperprolactinemia, and to assess one year-Cabergoline therapy effects on these parameters in both groups by using visceral adiposity index as an index for adipose tissue dysfunction.

Patients and methods: We enrolled 44 female patients with newly diagnosed prolactinoma; 31 with micro and 13 with macro adenoma. Also 42 female patients with idiopathic hyperprolactinemia who were matched according to age, weight, BMI, waist and prolactin level at the time of diagnosis.

Result:

- Non-significant difference were found in baseline prolactin, anthropometric, metabolic parameters and VAI between both groups.
- In Pearson correlation, prolactin levels significantly correlated with only FBS in prolactinoma, But correlated with BMI, weight, Waist, HDL-C, Triglyceride, FBS and VAI in idiopathic hyperprolactinemia.
- After 12 months cabergoline therapy, there is significant lower mean of VAI in idiopathic hyperprolactinemia in comparison with prolactinoma patients in spite of non-significant differences prolactin levels.
- Cabergoline therapy significantly improved most of the anthropometric, metabolic parameters and VAI. Cabergoline was more effective as regard BMI, waist circumference, HDLc and VAI among idiopathic hyperprolactinemia patients in comparison with prolactinoma patients without known cause regardless prolactin levels.

Conclusion: 12 months of Cabergoline treatment improves most of the anthropometric, metabolic parameters and VAI as a marker of adipose tissue dysfunction in both idiopathic hyperprolactinemia and prolactinoma patients. But cabergoline therapy was more effective in idiopathic hyperprolactinemia than prolactinoma patients even with normalization of prolactin level.

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