Dopamine agonist therapy in combination with somatostatin analogue treatment in patients with acromegaly: analysis of the German Acromegaly Registry

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Somatostatin analogues (SA) are recommended as the standard medical therapy in acromegaly, but only a part of the treated patients can be effectively controlled under continuous administration. According to the guidelines for acromegaly management, the combination of long-acting somatostatin analogues with dopamine agonists has been proposed, but the combined therapy has not yet been sufficiently evaluated. Retrospectively, we assessed patients with dopamine agonist addition to somatostatin analogue treatment in 35 out of the 1434 patients that have been entered into the German Acromegaly Registry. Only patients with somatostatin analogues treatment for at least 3 months before dopamine agonist addition and without radiotherapy during the monotherapy were considered.

Methods: Thirty-five patients fulfilled these criteria with 21 patients having received primary surgical therapy and 14 patients who were treated medically as primary treatment. Six patients received radiotherapy after primary treatment and before somatostatin analogue therapy was started (mean duration 28,8+/-28,6 months before combined therapy). Eleven patients received dopamine agonists as monotherapy before the combined treatment. Twenty-nine patients received octreotide and 6 patients received lanreotide which was combined with bromocriptin in 11 patients, quinagolide in 7 patients and cabergoline in 16 patients and a dopamine agonist not further specified in one patient at different concentrations. The mean duration of somatostatin analogue monotherapy before dopamine agonist addition was 24,7+/-25,9 months. In those patients without prior radiotherapy, IGF-1 levels before and after dopamine agonist add-on therapy were available in 9 patients, GH values after an oral glucose tolerance test in 6 patients and GH basal levels in 2 patients.

Results: Seven out of 9 patients with available IGF-1 levels did not have normal IGF-1 values according to the local reference ranges before dopamine agonist addition. After dopamine agonist addition, four patients had normal IGF-1 values, 4 patients still presented with elevated IGF-1 levels and one patient with uncertain values. However, the decrease in the mean IGF-1 values from 473,2+/-172,2 ng/ml to 437+/-221,1 ng/ml was not significant (p= 0,2986) (GH values are not further described due to the limited number available). Fourteen patients received further treatment after the combined therapy with either radiotherapy (n=8), medical treatment with the GH-receptor antagonist pegvisomant (n=4) or surgery (n=2).

Conclusion: This analysis within the German Acromegaly Registry shows the limitations and shortcomings of a retrospective analysis to judge the efficacy and clinical practices of a combination therapy with somatostatin analogues and dopamine agonists. Due to different combinations, dosages and treatment durations with only limited data for GH and IGF-1 values available, this analysis offers only a rough outlook. Prospective clinical studies should be performed to further evaluate which patient subgroup might profit from a dopamine agonist addition to somatostatin analogue treatment and to determine at which dosages the treatment should be given.