Pre-surgical medical treatment, a major prognostic factor of remission in acromegaly.


Department of endocrinology*, statistics ** and neurosurgery***, Timone hospital, 264 rue St Pierre, 13005 Marseille, France.

Following the recent evolution in therapeutic strategies for GH-secreting pituitary adenomas, determining optimal individualized patient management is now crucial.

**Objective:** To determine whether pre-surgical medical treatment (PSMT) in patients with acromegaly improves surgical outcome and to specify thresholds for such a strategy.

**Methods and design:** This retrospective study included 110 newly diagnosed acromegalic patients operated on between 1997 and 2007 at Timone Hospital, Marseille, France. The mean long-term follow-up period was 52 ± 36.6 months (median 41 months). Sixty-four patients (58.4%) received PSMT (long acting Somatostatin Analogs) during 2 to 18 months (mean 6.4 months) and all patients underwent pituitary surgery. Remission was based on updated criteria, associating GH nadir after oral glucose tolerance test <0.4 µg/L and normal IGF-1 for age, sex and gender at early (3 months) evaluation or at the end of follow-up (n=95).

**Results:**

At 3 months and at long-term evaluation, pre-treated and no pre-treated groups were comparable for the main confounding factors except for IGF-1 at diagnosis which was higher in patients with PSMT at both evaluations.

In multivariate analysis, PSMT was significantly linked to:

- **Early remission:** 45.3% patients in remission with PSMT vs 26.1% without; [OR=3.17 (1.15-8.73), p=0.009].
- **Long-term remission:** 61.1% patients in remission with PSMT vs 36.6% without; [OR=2.74 (1.04-7.26), p=0.022].

In multivariate analysis, PSMT was significantly linked to:

- **Early remission:** 45.3% patients in remission with PSMT vs 26.1% without; ([OR=3.17 (1.15-8.73), p=0.009]).
- **Long-term remission:** 61.1% patients in remission with PSMT vs 36.6% without; ([OR=2.74 (1.04-7.26), p=0.022]).

In multivariate analysis, PSMT was significantly linked to:

- **Early remission:** 45.3% patients in remission with PSMT vs 26.1% without; [OR=3.17 (1.15-8.73), p=0.009].
- **Long-term remission:** 61.1% patients in remission with PSMT vs 36.6% without; [OR=2.74 (1.04-7.26), p=0.022].

**Conclusion**

Pre-surgical medical treatment (PSMT) significantly improved short and long-term remission in operated acromegalic patients, independently of its duration and main confounding factors, and seemed to be especially interesting in adenomas larger than 15 mm.