

# Treatment of Cushing's disease (CD) after primary failure of pituitary surgery or recurrence: evaluation of long-term control by medical treatment

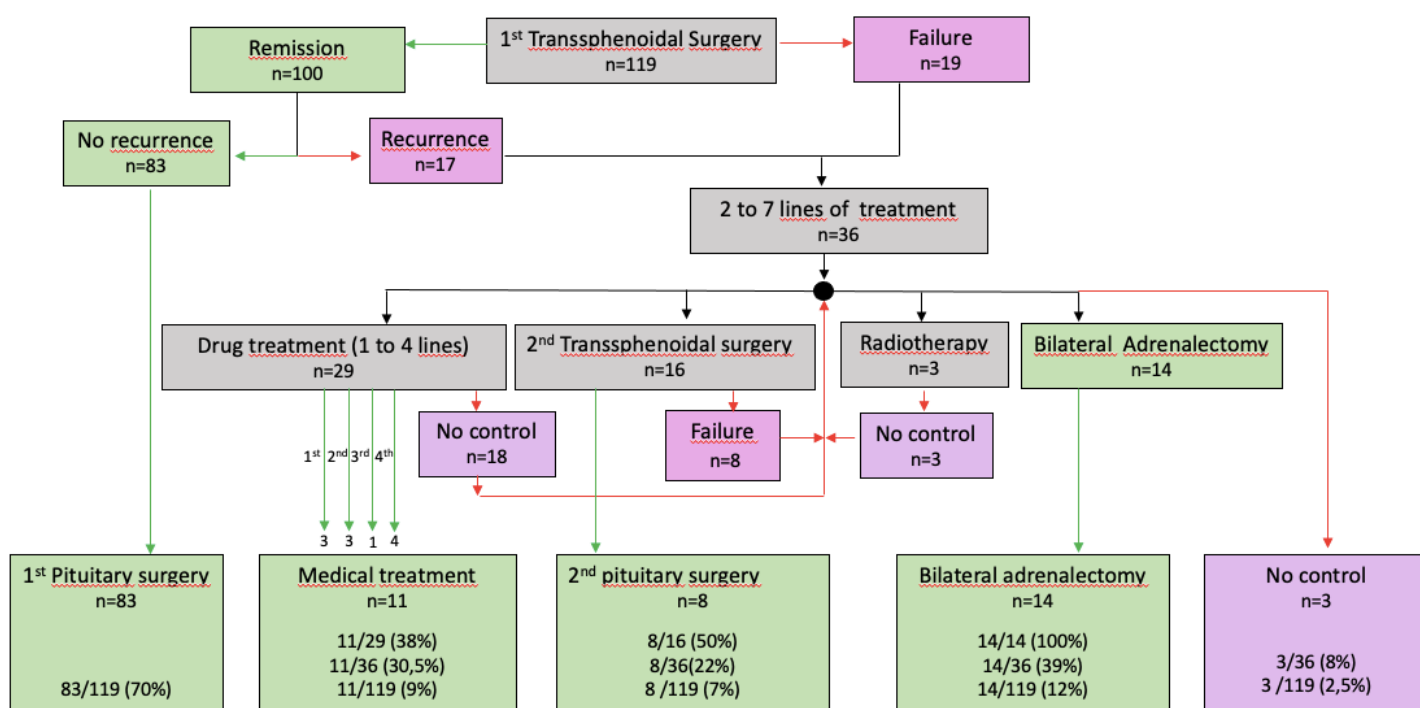
A. Ghalawinji<sup>a</sup>, J. Cristante<sup>a</sup>, M. Muller<sup>a</sup>, V. Lefournier<sup>b</sup>, P. Chaffanjon<sup>c</sup>, N. Sturm<sup>d</sup>, E. Gay<sup>e</sup>, O. Chabre<sup>a</sup>  
<sup>a</sup>Endocrinology, <sup>b</sup>Neuroradiology, <sup>c</sup>Endocrine surgery, <sup>d</sup>Pathology, <sup>e</sup>Neurosurgery University Hospital of Grenoble, France

## Objective

In case of failure of transsphenoidal surgery (TSS) or recurrence, the different second-line therapies used for treatment of Cushing's disease (CD) include drug treatment (DT), 2nd transsphenoidal surgery (2ndTSS), bilateral adrenalectomy (BA), pituitary radiotherapy (PR). We aimed to evaluate the long-term control by DT.

## Design and Methods

Monocentric retrospective study of 119 patients treated by PS for CD in 2001-2020, with 36 candidates for a second-line therapy, including 19 PS failures (surgical remission rate 84%) and 17 recurrences (recurrence rate 17%).



## Results

The 36 patients were treated either/or by DT: 29/36(80%); 2ndTSS: 16/36(50%); BA: 14/36(39%) and PR: 3/36(8%). In the 29 DT patients the drugs used were ketoconazole (27/29), metyrapone (15/29), cabergoline (11/29), osilodrostat (8/29), mitotane (3/29), pasireotide (3/29).

At the end of the study, control of CD was achieved by DT in 11 patients (30% of 36 patients, 34% of DT treated patients) 2<sup>nd</sup> TSS in 8 patients (22% of 36 patients, 50% of reoperated patients) and BA in 14 patients (39% of 36 patients, 100% of operated patients). The 11 patients controlled by DT were using either ketoconazole (6/27 exposed), metyrapone (1/15 exposed) or osilodrostat (6/8).

## Conclusion

In patients with Cushing's disease and either primary failure of transsphenoidal surgery or recurrence after a first transsphenoidal surgery, drug treatment allowed long-term control of 11/36 (30%) patients, who were all treated by adrenal cortisol synthesis inhibitors.

Drug treatment also allowed to delay surgery in 13/16 patients treated by a 2<sup>nd</sup> transsphenoidal surgery and in 11/14 patients treated by bilateral adrenalectomy