

**Zamanipoor Najafabadi AH et al. Surgery as a Viable Alternative First-Line Treatment for Prolactinoma Patients. A Systematic Review and Meta-Analysis. J Clin Endocrinol Metab. 2020;105(3):e32-41. doi: 10.1210/clinem/dgz144.**

**CONTEXT:** The improved remission and complication rates of current transsphenoidal surgery warrant reappraisal of the position of surgery as a viable alternative to dopamine agonists in the treatment algorithm of prolactinomas.

**OBJECTIVE:** To compare clinical outcomes after dopamine agonist withdrawal and transsphenoidal surgery in prolactinoma patients.

**METHODS:** Eight databases were searched up to July 13, 2018. Primary outcome was disease remission after drug withdrawal or surgery. Secondary outcomes were biochemical control and side effects during dopamine agonist treatment and postoperative complications. Fixed- or random-effects meta-analysis was performed to estimate pooled proportions. Robustness of results was assessed by sensitivity analyses.

**RESULTS:** A total of 1469 articles were screened: 55 (10 low risk of bias) on medical treatment (n = 3564 patients) and 25 (12 low risk of bias) on transsphenoidal surgery (n = 1836 patients). Long-term disease remission after dopamine agonist withdrawal was 34% (95% confidence interval [CI], 26-46) and 67% (95% CI, 60-74) after surgery. Subgroup analysis of microprolactinomas showed 36% (95% CI, 21-52) disease remission after dopamine agonist withdrawal, and 83% (95% CI, 76-90) after surgery. Biochemical control was achieved in 81% (95% CI, 75-87) of patients during dopamine agonists with side effects in 26% (95% CI, 13-41). Transsphenoidal surgery resulted in 0% mortality, 2% (95% CI, 0-5) permanent diabetes insipidus, and 3% (95% CI, 2-5) cerebrospinal fluid leakage. Multiple sensitivity analyses yielded similar results.

**CONCLUSIONS:** In the majority of prolactinoma patients, disease remission can be achieved through surgery, with low risks of long-term surgical complications, and disease remission is less often achieved with dopamine agonists.