

# Bromocriptine for lactotroph pituitary neuroendocrine tumor medical treatment

Although patients can present with variable hormone dysregulation and symptom severity, the use of [dopamine agonists](#) remains a first-line treatment. While bromocriptine has been found to increase [tumor fibrosis](#), the effect of [cabergoline](#) on [collagen deposition](#) has been disputed.

The aim of Pecorari et al. is to understand the influence of cabergoline on tumor fibrosis prior to resection. Case Presentations Four male patients who underwent prolactinoma resection were included in this report. The average age was 39.8 years (range: 26-52 years). Pre-treatment prolactin levels ranged from 957.8 to 16,487.4 ng/mL. Three patients received cabergoline for at least 1 month prior to surgery (treatment range: 1-6 months). One patient had surgery without prior cabergoline use. Pathology reports confirmed each tumor to be of lactotroph origin. For each sample, Masson's trichrome staining was performed and the percentage of sample fibrosis was quantified using an artificial intelligence imaging software. Among those who received preoperative cabergoline, the extent of tumor fibrosis was in the range of 50 to 70%. In contrast, specimen fibrosis was approximately 15% without cabergoline use. Conclusion This report demonstrates that a short duration of preoperative cabergoline can cause significant prolactinoma fibrosis. Understanding the effect of cabergoline on tumor consistency prior to surgery is essential as increased fibrosis can lead to more difficult tumor removal, reduce the extent of resection, and increase surgical complications. Considering these effects, further studies regarding the use of surgery prior to cabergoline for prolactinoma management are warranted <sup>1)</sup>

<sup>1)</sup>

Pecorari IL, Qama E, Akbar N, Colley P, Fang CH, Agarwal V. The Effect of Preoperative Cabergoline on Prolactinoma Fibrosis: A Case Series. J Neurol Surg Rep. 2024 May 15;85(2):e66-e73. doi: 10.1055/s-0044-1786740. PMID: 38751869; PMCID: PMC11095984.

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