


# Spontaneous regression of meningiomas after interruption of nomegestrol acetate: a series of three patients

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Original Article - Tumor - Meningioma

First Online: 19 February 2019

43

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## Abstract

### Background

The relationship between increased meningioma incidence and growth and long-term hormonal therapy with cyproterone acetate (CPA) in women has been recently established in literature. Following the raise in awareness from hormonal treatment, we describe a potential relationship between the progesterone agonist nomegestrol acetate (NOMAC) and meningioma growth.

### Methods

After implementation of a screening protocol to detect potential interactions between hormonal exposure and occurrence of meningioma, we identified patients taking NOMAC and newly diagnosed with a meningioma. NOMAC was stopped and those patients were followed tightly both clinically and radiologically. Retrospective volumetric analysis of the tumors was performed on the imaging.

### Results

Three patients were identified for the study. After cessation of the NOMAC, tumor shrinkage was documented for all meningiomas within the first month. Up to 70% of tumor volume reduction was observed during the first year of follow-up in one of them. None of the patients developed new symptoms.

### Conclusion

We report the first cases of meningiomas responsiveness to discontinuation of hormonal therapy with NOMAC. Similarly to cases associated with long-term CPA intake, tumor reduction, and improvement of clinical symptoms can be observed after cessation of NOMAC.

### Keywords

Progestational agonist

Meningioma

Cyproterone acetate

Nomegestrol acetate