

Functional gonadotroph pituitary neuroendocrine tumor

Updated Term for “Functional [Gonadotroph Adenoma](#)”

Correct term now:

Functional [gonadotroph pituitary neuroendocrine tumor](#) (functional gonadotroph PitNET)

Bilateral atypical ovarian masses: don't overlook a functional gonadotropic pituitary adenoma

In a [case report](#) and [literature review](#) Hagege et al. [Reims](#) University Hospital Center; Foch Hospital, Suresnes, France [Frontiers in Endocrinology](#) describe a rare case of functional gonadotroph pituitary neuroendocrine tumor presenting as bilateral ovarian masses, plus a literature review of similar diagnostic pitfalls where FGAs were misdiagnosed, leading to unnecessary ovarian surgery. Functional gonadotroph pituitary neuroendocrine tumors may mimic ovarian tumors or hyperstimulation syndrome, resulting in delayed diagnosis—even up to a decade. In reproductive-aged women presenting with bilateral ovarian cysts or masses, hormonal pituitary evaluation (gonadotropins, prolactin) is crucial to avoid unwarranted surgical interventions ¹.

Critical Appraisal

* ♦ Originality & relevance:

High. Functional gonadotroph adenomas are rare but underrecognized, and the demonstration of diagnostic delays underscores significant clinical implications.

* ♦ Methodology:

The single-case narrative is clear and well-presented. The literature search, yielding 13 additional cases, is valuable. However, details on search strategy (databases, inclusion/exclusion criteria) are missing—limiting reproducibility and potential comprehensiveness.

* ♦ Interpretation of findings:

Strong emphasis on clinical vigilance for pituitary causes in atypical ovarian mass presentations. However, the discussion could benefit from more nuanced diagnostic algorithms and justification for hormonal panels in differential diagnosis protocols.

* ♦ Limitations:

- Case report inherently low-level evidence.
- Small number of cases in review (n=14), limiting generalizability.
- No long-term follow-up provided post-pituitary treatment.

* ♦ **Ethical considerations:**

Ethics and conflict of interest transparently reported. Patient consent is assumed but not explicitly stated.

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Verdict & Takeaway

Final verdict: 7 / 10 A well-documented case that fills an important clinical gap, though methodological detail and generalizability are limited by the nature of the study.

Clear takeaway for the neurosurgeon: In women of reproductive age presenting with atypical bilateral ovarian masses—especially with galactorrhea or hormonal imbalances—functional pituitary adenomas must be considered. Early endocrine evaluation could prevent unnecessary gynecologic surgery.

Bottom line: Pituitary FGAs are rare but clinically significant mimics of ovarian pathology. Always include pituitary hormone panel in the workup to guide proper management.

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Citation: *Bilateral atypical ovarian masses: don't overlook a functional gonadotropic pituitary adenoma* Hagege E, Vitellius G, Fevre A, Mostaert M, Litre F, Graesslin O, Pirtea P, Delemer B. *Front Endocrinol (Lausanne)*. 2025 Jun 23;16:1597813. doi: 10.3389/fendo.2025.1597813. eCollection 2025.

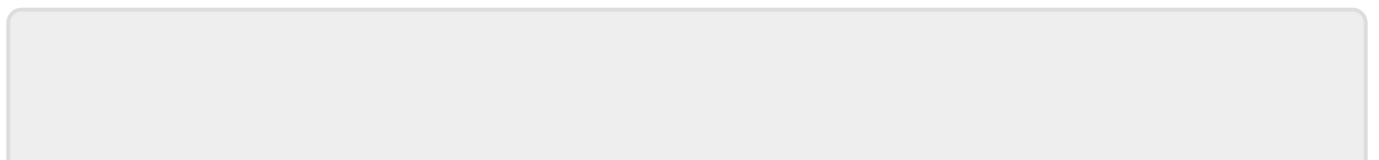
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Tags: functional gonadotroph adenoma, pituitary adenoma, ovarian mass differential, hormonal evaluation, case report

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Hagege E, Vitellius G, Fevre A, Mostaert M, Litre F, Graesslin O, Pirtea P, Delemer B. Bilateral atypical ovarian masses: don't overlook a functional gonadotropic pituitary adenoma. Front Endocrinol (Lausanne). 2025 Jun 23;16:1597813. doi: 10.3389/fendo.2025.1597813. PMID: 40626238; PMCID: PMC12229800.



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