



PITUITARY HYPERPLASIA IN HYPOTHYROIDISM

Introduction

Pituitary enlargement in patients with long-standing hypothyroidism has been confirmed with several studies. Besides, primary hypothyroidism may lead to increased prolactin levels. Therefore, elevated prolactin levels associated with primary hypothyroidism may lead the physicians to investigate for the presence of a concomitant pituitary disease, either a microprolactinoma or a mass resulting in pituitary stalk compression. Prolactinomas present with amenorrhea, galactorrhea, hyperprolactinemia. However, primary hypothyroidism, may also present with these features secondary to hyperplasia of the pituitary gland. In primary hypothyroidism, most often, elevated prolactin levels is not a result of a prolactinoma, but a result of pituitary hyperplasia. It is also reported that rapid progression of pituitary hyperplasia may develop following hypothyroidism.

Case Report

38-year-old woman was admitted to our hospital with complaints of galactore. Her prolactin level was three-fold increased. She also has a long-standing primary hypothyroidism, due to Hashimoto's disease. MRI for pituitary gland was scheduled to rule out prolactinoma. Dynamic postcontrast MRI examination did not show any lesion. MRI revealed diffuse enlarged gland. The gland volume of this patient was 800 mm³, which is about 300-450 mm³ in normal population.

References

- 1) Wolansky LJ, et al. (1996). MRI of pituitary hyperplasia in hypothyroidism. *Neuroradiology*, 38: 50-52
- 2) Hoogenberg K and van Tol KM (2003). Pituitary hyperplasia during primary hypothyroidism. *Thyroid*, 13, 8: 831-832.
- 3) Shimono T, et al. (1999). Rapid progression of pituitary hyperplasia in humans with hypothyroidism: demonstration with MR imaging. *Radiology*, 213: 383-388.

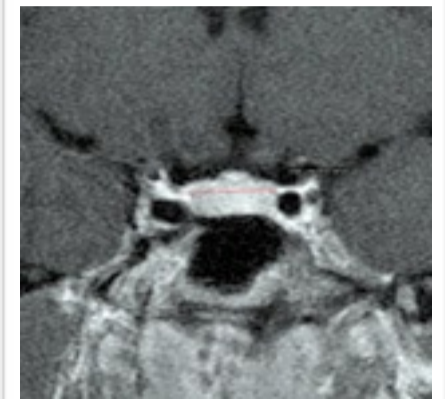


Figure-1: Coronal contrast-enhanced MRI shows the enlarged gland, without any visible adenoma.

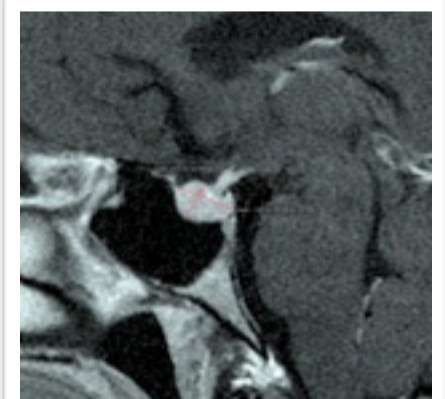


Figure-2: Sagittal contrast-enhanced MRI shows the enlarged gland, without any visible adenoma.