

Tytrotroph pituitary neuroendocrine tumor

Thyroid-stimulating hormone (TSH)-secreting pituitary neuroendocrine tumors (TSHomas) are rare and usually present with hyperthyroidism. Calcification in pituitary tumors is an infrequent finding. Herein, we report an extremely rare case of TSHoma with diffuse calcification.

Case description: A 43-year-old man was admitted to our department with a complaint of palpitations. An endocrinological examination revealed elevated serum levels of TSH, free triiodothyronine (FT3), and free thyroxine, whereas the physical examination revealed no obvious abnormality. Computerized tomography (CT) showed a sellar mass with diffuse calcification. Contrast-enhanced T1-weighted images revealed a less-enhancing tumor without obvious suprasellar or parasellar expansion. The tumor was completely removed via endoscopic transnasal-sphenoidal surgery. Microscopically, nests of cells were inconspicuous among the diffuse psammoma bodies. Expression of TSH was patchy, and only several TSH-positive cells were observed. Postoperatively, the serum levels of TSH, FT3, and FT4 decreased to their normal range. Follow-up MR images showed no evidence of residual tumor or regrowth after the resection.

Conclusions: Herein, we report a rare case of TSHoma with diffuse calcification that presented with hyperthyroidism. A correct and early diagnosis was made according to the European Thyroid Association guidelines. This tumor was completely removed via endoscopic transnasal-transsphenoidal surgery (eTSS), and thyroid function was normalized after the operation ¹⁾.

Guidelines

2013 European Thyroid Association Guidelines for the Diagnosis and Treatment of Thyrotropin-Secreting Pituitary Tumors <https://www.eurothyroid.com/files/download/etj-0002-0076.pdf>

¹⁾

Yan H, Yan C, Mao J, Jin W. Case report: A rare case of thyrotropin-secreting pituitary macroadenoma with diffuse calcification presenting with hyperthyroidism and literature review. *Front Oncol.* 2023 Feb 16;13:1121140. doi: 10.3389/fonc.2023.1121140. PMID: 36874111; PMCID: PMC9978486.

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