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## Pituitary hyperplasia during primary hypothyroidism

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## Images in Thyroidology\*

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### Pituitary Hyperplasia During Primary Hypothyroidism

K. Hoogenberg and K.M. van Tol

**E**LEVATED PROLACTIN LEVELS accompanying primary hypothyroidism may lead physicians to consider the presence of a concomitant pituitary disease, either a microprolactinoma or a sellar mass of any origin with pituitary stalk compression. The fact that successive magnetic resonance imaging may further increase the suspicion of a pituitary disorder is illustrated in this case. It shows enlargement of the pituitary gland in a 51-year-old man with primary hypothyroidism with an elevated thyroid stimulating hormone level (120 mU/L). Serum prolactin (580 mU/L, reference range, 50–200 mU/L) was also increased (Fig. 1A and 1B). After 6 months of levothyroxine substitution, the enlargement of the pituitary gland as well as the elevated serum thyroid stimulating hormone and prolactin levels normalized (Fig. 1C and 1D).

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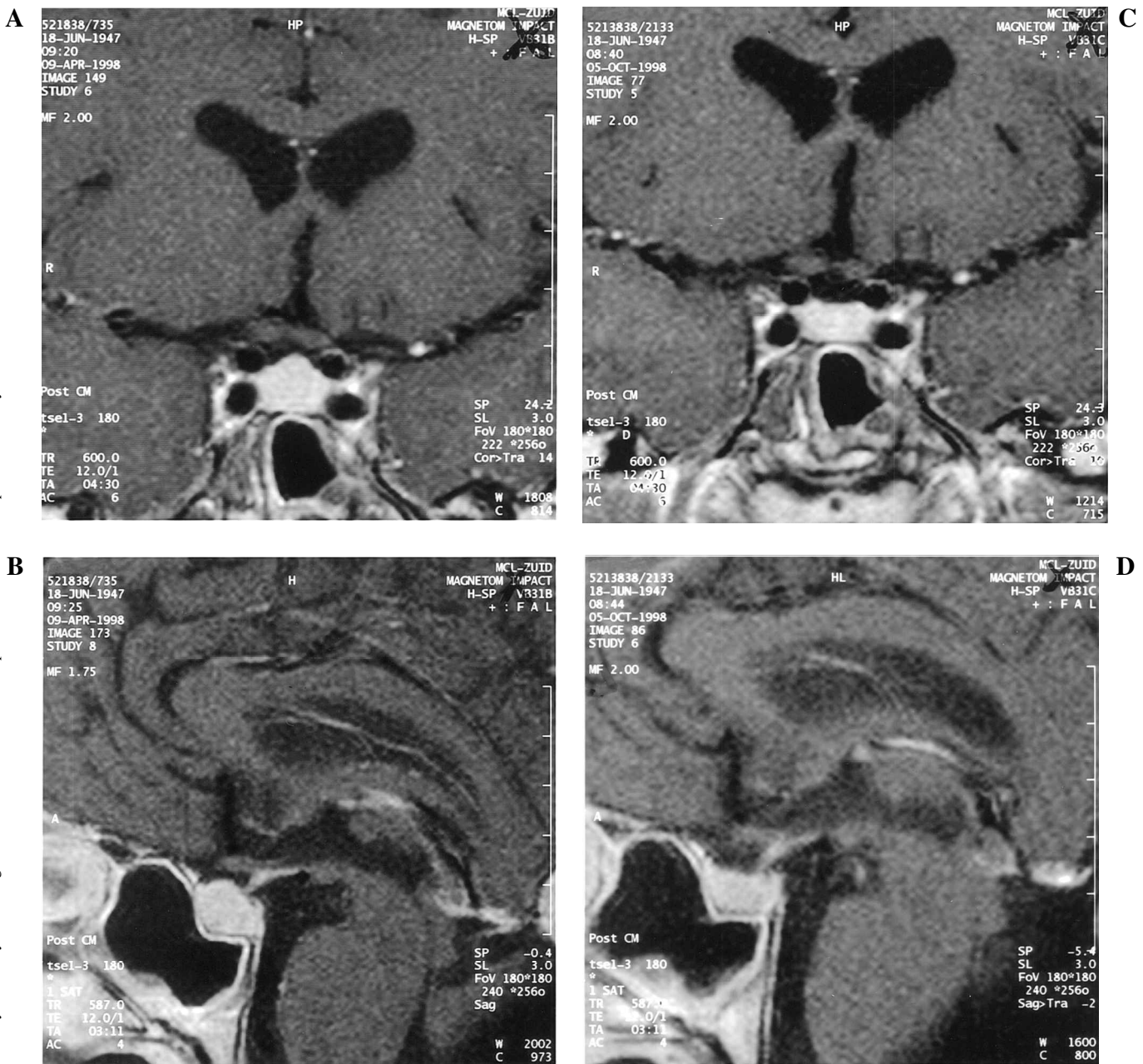
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**FIG. 1.** T1-weighted gadolinium enhanced magnetic resonance imaging of the pituitary gland during hypothyroidism (Fig. 1A and 1B) and 6 months after levothyroxine substitution (Fig. 1C and 1D). The coronal (A) and sagittal (B) images show an enlarged pituitary gland, 12 mm in size, with a normal gadolinium distribution. Furthermore, a small portion of the pituitary is near the optic chiasm. On similarly performed coronal (C) and sagittal (D) images, the pituitary gland enlargement resolved with normalisation of its size and contour.