Vanishing Pituitary Gland on MR Imaging

Tamiko Tamanaha¹, Takeshi Usui¹², Ichiro Fujisawa⁴, Yoshiaki Okuno⁷, Sachiko Minamiguchi⁴, Toshiki Komeda⁵, Hitomi Iogawa¹, Hanae Hagiwara¹, Tetsuya Tagami¹², Mitsuhide Naruse¹² and Akira Shimatsu¹²

Key words: hemochromatosis, pituitary, MRI

(Inter Med 49: 201-202, 2010)
(DOI: 10.2169/internalmedicine.49.2877)

A 54-year-old woman was referred to our hospital because of severely reduced bone mineral density. She had been diagnosed with congenital anemia and idiopathic hemochromatosis of unknown etiology. She was also diag-

Picture 1. T1-weighted (A) image intensity was decreased in the anterior pituitary and normal in the posterior pituitary. Anterior pituitary intensity in T2-weighted (B) image was almost non-existent. Pancreas and liver showed low intensity (C). Berlin blue iron staining revealed iron deposits in the liver (D). Splenectomy has been performed at age 38 on the diagnosis of hereditary spherocytosis.
nosed with insulin-dependent diabetes at age 36 and primary hypothyroidism without auto-antibodies at age 41. Although her serum ferritin level was extremely high (4,315 ng/mL), she had never had a blood transfusion. Endocrinologic examination revealed hypogonadotropic hypogonadism (LH 0.3 U/L, FSH 0.6 U/L, estradiol <10 pg/mL), primary hypothyroidism (TSH 83.23 mU/mL, free T4 0.2 ng/dL), and insulin-dependent diabetes with a minimal insulin secretory response. The pituitary gland showed markedly decreased signal intensity in both T1- and T2-weighted magnetic resonance (MR) images (Picture 1A, B), as reported previously (1-3). MR imaging of the abdomen showed decreased signal intensity in the liver and pancreas (Picture 1C). Iron deposition in the liver was visualized by iron staining of the biopsy sample (Picture 1D).

References