

Pituitary Iron Deposition in B Thalassemia

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Synopsis:

This study will test the following hypothesis:

Thalassemia patients with pituitary failure will demonstrate greater pituitary iron deposition than those without pituitary failure.

This hypothesis will be tested through the following specific aims:

1. Determine pituitary iron deposition by MRI R2 in patients with thalassemia
2. Compare pituitary iron deposition in patients with thalassemia and gonadal failure (hypothalamic-pituitary-gonadal [HPG] dysfunction) measured by biochemical evaluation (luteinizing hormone [LH-ICMA], follicle-stimulating hormone [FSH-ICMA], gonadal steroid, thyroid stimulating hormone [TSH], Free T4, fasting blood sugar, IGF-1, IGF-BP3, and prolactin) and to that in patients with thalassemia without gonadal failure.
3. Explore the relationship between pituitary iron deposition measured by MRI and total body iron estimated by liver iron concentration (LIC; by biosusceptometry) and serum ferritin.