In the present case, the signal intensity of the gland was slightly reduced on both T1 and T2 weighted SE sequences. For confirmation, GRE T2* weighted sequence was performed, which showed marked decrease in the signal intensity of the pituitary gland.

In fact, among the various imaging techniques that have been investigated, the best predictor of adenohypophyseal iron overload has been the signal intensity reduction in the anterior lobe of the pituitary gland on GRE T2*-weighted images. The work by Argyropoulou’s group and another group reported GRE T2* weighted images to be the most sensitive sequence for establishing iron overload in the pituitary gland.

Pituitary involvement results in hypogonadotropic hypogonadism, as it did in this patient with B thalassemia. Thyroid, adrenals and gonads are also affected in these patients; however this patient was spared. Cytotoxic effect of iron overload is considered to be dose dependent and in the case of hypothalamic-pituitary axis an initial reversible and a later irreversible phase of pituitary dysfunction has been suggested. Early detection of pituitary iron overload may be useful in preventing irreversible loss of pituitary function or in planning of future treatment.

Conclusion

Pituitary siderosis in patients with thalassemia is not uncommon. However its development, onset and progression do not correlate with hepatic iron overload. MRI of the pituitary with GRE T2* sequence provides useful information regarding pituitary siderosis and can be used in conjunction with laboratory data to prevent development of further pituitary dysfunction.

References


Announcement

The 2nd Congress of the Association of Southeast Asian Pain Societies will be held from 5 - 8 December 2007 at Kuala Lumpur, Malaysia. For more details visit the website www.masp.org.my