GLOSSARY

PITUITARY APOPLEXY
An acute disorder that presents with severe neurological symptoms caused by ischemic or hemorrhagic infarction of a pituitary adenoma

GROWTH HORMONE RESISTANCE
Insensitivity to growth hormone is often seen in critically ill patients, associated with elevated growth hormone levels and low insulin-like growth factor 1 levels

Pituitary apoplexy—a rare disorder?

The literature states that PITUITARY APOPLEXY is a rare disorder; however, a new study by Nielsen and colleagues suggests that the disorder occurs more frequently than previous reports indicate.

In this retrospective, Danish study, the authors identified 192 patients with suprasellar, clinically inactive adenoma who were operated on between 1985 and 1996. The median follow-up period after surgery was 13.7 years. Pituitary apoplexy was diagnosed in 41 (21%) patients. After surgery, 9 of these patients had normal pituitary function, 14 were panhypopituitary, 14 had partial pituitary insufficiency, and 4 patients were not assessed. Overall, 12 patients with pituitary apoplexy died during the follow-up period, giving a standard mortality ratio of 1.09 (95% CI 0.62–1.92), which was similar to the standard mortality ratio for the remaining 151 patients who did not have pituitary apoplexy (1.17; 95% CI 0.86–1.59).

Despite the use of strict criteria to diagnose patients with pituitary apoplexy, the authors conclude that the incidence of this disorder is much higher than was observed in previous studies, which found an incidence of between 1.9% and 6.8%. The authors highlight their finding that the survival outcome of all patients with a nonfunctioning adenoma who undergo surgery is independent of the occurrence of pituitary apoplexy.

Marie Lofthouse

Original article Nielsen EH *et al.* (2006) Frequent occurrence of pituitary apoplexy in patients with non-functioning pituitary adenoma. *Clin Endocrinol* **64:** 319–322

Pituitary function can recover or worsen in the year following traumatic brain injury

Until recently, the majority of data on hypopituitarism following traumatic brain injury (TBI) have come from retrospective studies, which did not assess changes in pituitary hormones occurring within the first few hours postinjury. Tanriverdi *et al.,* therefore, carried out a prospective, single-center study that assessed the prevalence of anterior pituitary hormone deficiencies in 52 patients with TBI within 24 h of admission, compared with the prevalence of deficiencies 1 year later.

The authors found that most of the hormonal changes observed in the acute phase were transient, and did not predict deficiencies after 1 year. Low insulin-like growth factor 1 levels (<84 ng/ml) immediately after TBI, however, might predict growth hormone deficiency at follow-up (growth hormone deficiency was the most prevalent deficit). The authors indicate that decreased growth hormone secretion, rather than peripheral GROWTH HORMONE RESISTANCE, was the cause of growth hormone deficiency in these patients.

After 1 year, just over half the patients had a deficiency in at least one pituitary hormone. The process of worsening and recovery throughout follow-up was dynamic: while 30 patients recovered from their hormone deficiencies, 27 patients developed new ones. Evaluating pituitary function on an ongoing basis after TBI is essential, the authors say, irrespective of the severity of the initial injury.

Chrissie Giles

Original article Tanriverdi F *et al.* (2006) High risk of hypopituitarism after traumatic brain injury: a prospective investigation of anterior pituitary function in the acute phase and at 12-months after the trauma. *J Clin Endocrin Metab* [doi:10.1210/jc.2005-2476]

Wait-and-see policy after trans-sphenoidal surgery is effective without radiotherapy

Trans-sphenoidal surgery is the treatment of choice for patients with nonfunctioning pituitary macroadenomas. After surgery, some patients undergo radiotherapy aimed at preventing regrowth of the tumor, although radiotherapy for this purpose is not always effective, and is associated with a higher incidence of hypopituitarism and complications such as secondary brain tumors.

In a retrospective, follow-up study, Dekkers *et al*. assessed 109 patients with nonfunctioning pituitary macroadenomas, who underwent trans-sphenoidal surgery at Leiden University Medical Center, The Netherlands, during the period 1992–2004. Visual-field defects improved after surgery in 80% of patients. There was no regrowth or recurrence of the tumor in 90% of patients after 6 years of follow-up. During the follow-up period, 10 patients died because of malignancy, or cardiovascular or cerebrovascular disease. Only 6 of 109 patients received postsurgical radiotherapy, because of a large