Mortality and pituitary disease

Mortalité des pathologies hypophysaires

Paul M. Stewart*, Mark Sherlock

Department of Endocrinology, The Medical School, College of Medical and Dental Sciences Edgbaston, University of Birmingham, Birmingham B15 2TT, United Kingdom

Abstract

Outcome data from large series confirm increased mortality of patients with pituitary tumours, predominantly due to vascular disease. Control of cortisol secretion and growth hormone (GH) hypersecretion (together with cardiovascular risk factor reduction) is key in the normalisation of mortality rates in patients with Cushing’s disease and acromegaly, respectively, though some excess mortality may persist even in “cured” patients. © 2012 Published by Elsevier Masson SAS.

Résumé

Les données issues de grandes séries épidémiologiques confirment l’excès de mortalité des patients porteurs de tumeurs hypophysaires. Le contrôle de la sécrétion de cortisol et de l’hypersécrétion de GH (parallèlement à la réduction des facteurs de risque cardiovasculaire) sont déterminants dans la normalisation des taux de mortalité chez les patients atteints de maladie de Cushing ou d’acromégalie, même s’il persiste une surmortalité chez les patients « guéris ». © 2012 Publié par Elsevier Masson SAS.

Pituitary tumours account for 6% of all intracranial neoplasms. Outcome data from large series confirm increased mortality predominantly due to vascular disease [1]. Control of cortisol secretion and growth hormone (GH) hypersecretion (together with cardiovascular risk factor reduction) is key in the normalisation of mortality rates in patients with Cushing’s disease and acromegaly, respectively [2–5], though some excess mortality may persist even in “cured” patients [1,6]. For patients with acromegaly, the role of IGF-I as a predictable outcome measure is less clear-cut [2]. Pituitary radiotherapy is a further factor that has been associated with increased mortality, particularly from cerebrovascular disease. Paradoxically, whilst a link with hormone hypersecretion is clear in some tumours, hypopituitarism is also associated with increased and predominantly cardiovascular mortality with standardised mortality ratios (SMR) of approximately 1.8:1 [7–9]. Confounding pituitary hormone deficiencies such as gonadotropins, ACTH deficiency (with higher doses of hydrocortisone replacement conveying the greatest risk [10]) and growth hormone deficiency [11,12] have all been postulated to have an aetiological role, but an evidence base on mortality outcomes from replacement regimens are lacking. Although standardized mortality ratios in pituitary disease are falling due to improved treatment, mortality for many conditions are still elevated above that of the general population, and therefore further measures are needed. Finally, patients with craniopharyngioma have a particularly increased risk of mortality (SMR 10:1) [1,8,13] as a result of the often extensive tumor itself and its treatment to control tumor growth with ensuing hypothalamic damage (morbid obesity, cranial diabetes insipidus); this is a key area for future research in order to optimize the outcome for these patients.

Disclosure of interest

The authors have not supplied their declaration of conflict of interest.

References


