Prevalence and incidence of pituitary adenomas

Prévalence et incidence des adénomes hypophysaires

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Abstract

Reliable epidemiological data on pituitary adenomas (PAs) are of major importance for estimating the burden on the Health Care System and for designing optimal resource distribution for clinical care and for research activities. Cross-sectional studies from Switzerland, Belgium and the UK have shown that PAs have a prevalence of 78 to 94 cases/100,000 inhabitants (three to five times higher than previously thought). Furthermore, data from Northern Finland show an overall standardized incidence rate of 4 per 100,000 with the incidentally discovered ones demonstrating an increase. The enhanced awareness of pituitary disease and the recent advances in the diagnostic technologies have contributed to the earlier recognition of PAs. Studies from diverse populations and of larger sample size are needed to expand our insight on the epidemiology of PAs.

Résumé

Il est indispensable de disposer de données épidémiologiques fiables sur les adénomes hypophysaires afin d’en estimer la charge sur le système de santé et d’évaluer la répartition des moyens optimaux à allouer pour la prise en charge clinique et la recherche. Des études transversales menées en Suisse, en Belgique, et au Royaume-Uni montrent que la prévalence des adénomes hypophysaires est de 78 à 94 cas/100 000 habitants (trois à cinq fois supérieure à ce que l’on pensait). De plus des données provenant du Nord de la Finlande indiquent une incidence totale de quatre pour 100 000, avec une augmentation des incidentalomes. La plus grande attention portée aux adénomes hypophysaires et les progrès faits dans les techniques d’imagerie ont contribué à une reconnaissance plus précoce des adénomes hypophysaires. On manque néanmoins d’études à plus grande échelle sur des populations plus variés pour se faire une idée plus précise de l’épidémiologie des adénomes hypophysaires.

Accurate data on the epidemiology of pituitary adenomas (PAs) are of major importance in order to estimate the burden on the Health Care System and to allow optimal resource distribution for both clinical care and research activities [1].

Recent cross-sectional studies in the urban area of Fribourg (Switzerland), in the province of Liege (Belgium) and in Banbury (Oxfordshire, UK) have shown that PAs have prevalence three to five times higher than previously thought (78 to 94 cases/100,000 inhabitants) [2–4]. In the Banbury study, prolactinomas were the most common PAs (44 cases/100,000) followed by non-functioning pituitary adenomas (22 cases/100,000), somatotropinomas (nine cases/100,000) and corticotroph adenomas (one case/100,000). The median age at diagnosis and the duration of symptoms until diagnosis (in years) was for prolactinomas 32.0 and 1.5, non-functioning pituitary adenomas 51.5 and 0.8 and acromegaly 47 and 4.5, respectively. Prolactinoma was the most frequent PA diagnosed up to the age of 60 years and non-functioning pituitary adenoma after the age of 60. Non-functioning pituitary adenomas dominated in males (57% of all males with PA) and prolactinomas in females (76% of all females with PA) [3]. In the Liege study, prolactinomas comprised 66% of the adenomas, followed by non-functioning (14.7%), somatotropinomas (13.2%), and Cushing’s disease (5.9%) [4]. A retrospective descriptive analysis of PA patients diagnosed during 1992–2007 in Northern Finland disclosed an overall standardized incidence rate (SIR) 4 per 100,000 (prolactinomas 2.2 per 100,000, non-functioning 1.0 per 100,000, somatotropinomas 0.34 per 100,000, ACTH-secreting 0.17 per 100,000 and TSH-secreting 0.03 per 100,000).
The SIR of incidentally discovered PAs increased significantly from 1992–1999 to 2000–2007 (0.59 to 1.6, respectively), which accounted for the perceived increasing trend in the overall SIR of PAs [5].

The increased awareness of pituitary disease and the recent advances in the diagnostic technologies have contributed to the earlier recognition of PAs. Studies with larger sample size from diverse populations are needed, aiming to confirm the current data and to clarify possible geographical variations, as well as the effect of other factors (e.g. environmental, race). This information will form the basis for public health decisions and could also assist in creating hypotheses on possible causal factors.

**Disclosure of interest**

The author declares that she has no conflicts of interest concerning this article.

**References**


