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Thyroid dysfunction and headache

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Abstract An observational study of thyroid function tests performed in patients with headache prior to referral to a neurological clinic found no headache cases attributable to either hypothyroidism or hyperthyroidism. The role of thyroid dysfunction in the aetiology of headache remains uncertain.

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The role of thyroid dysfunction in headache pathogenesis remains uncertain. The International Headache Society (IHS) Classification of Headache Disorders Second Edition includes “Headache attributed to hypothyroidism” (10.4); hyperthyroidism is mentioned under the Appendix heading “Headache attributed to other metabolic or systemic disorders” (A10.7.1). In 102 hypothyroid patients, approximately 30% had bilateral, continuous, non-pulsatile headache [1], but no cases of hypothyroidism were found in a series of 21 chronic headache patients [2]. Hyperthyroidism has been suggested to exacerbate migraine [3].

An observational study of consecutive headache patients referred to general neurology outpatient clinics

[4] was undertaken to explore further the clinical utility of thyroid function tests (TFTs) in the diagnosis and management of headache patients.

Over a 6-month period, 119 headache patients were seen (age range: 16–78 years; M:F=45:74). All had primary headache disorders, the majority in the categories of tension-type headache (66) and migraine (46) [4].

In 13 patients (11%; age range: 17–53 years; M:F=1:12), TFTs had been performed by a general practitioner prior to referral to secondary care. In 11, TFTs were normal, including one patient with known hypothyroidism receiving thyroxine. Two new cases of biochemical hypothyroidism were identified; on thyroxine treatment, one experienced subjective headache improvement but

not resolution, and hence did not fulfil diagnostic criteria for “Headache attributed to hypothyroidism”. Final IHS diagnoses in this subgroup were chronic tension-type headache (10), chronic migraine (2) and migraine without aura (1).

Although aetiologically relevant thyroid dysfunction was not encountered in this small cohort, a population-

based study suggested that women with raised thyroid-stimulating hormone were protected from headache [5], contrary to the previous report of headache in association with hypothyroidism [1]. Hence this topic is still controversial; no indication of the clinical usefulness of TFTs in headache can be given at present. Further population-based studies of TFTs in headache are required.

References

1. Moreau T, Manceau E, Giroud-Baleyrier F, Dumas R, Giroud M (1998) Headache in hypothyroidism. Prevalence and outcome under thyroid hormone therapy. *Cephalalgia* 18:687–689
2. Amy JR (1987) Tests of thyroid function in chronic headache patients. *Headache* 27:351–353
3. Thomas DJ, Robinson S, Robinson A, Johnston DG (1996) Migraine threshold is altered in hyperthyroidism. *J Neurol Neurosurg Psychiatry* 61:222 (abstract)
4. Gahir KK, Larner AJ (2006) Primary headache disorders in the emergency department: perspective from a general neurology outpatient clinic. *Emerg Med J* 23 (*in press*)
5. Hagen K, Bjoro T, Zwart JA, Vatten L, Stovner LJ, Bovim G (2001) Low headache prevalence amongst women with high TSH values. *Eur J Neurol* 8:693–699