**Title**

Head imaging for headaches in general practice: insights from a 7-year retrospective study.

**Author and affiliations**

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**Background**

Headaches present commonly in general practice, and doctors face uncertainties and pressures in dealing with them. Robust, evidence-based and up-to-date guidelines are necessary to aid decisions on when and who to investigate.

**Aims**

This study identifies key characteristics of headaches investigated through head imaging, in the hope of strengthening existing guidelines.

**Method**

A 7-year retrospective analysis of head imaging scans ordered for investigating primary headaches among patients aged ≥18 in an Australian general practice setting.

**Results**

A total of 517 patients, aged 18-94 years (45.5+/-16.2), presented with primary headaches, out of which 109 (21.1%) required initial head imaging and 14 (2.7%) had repeat scans. The age group of 40-59years (38.5%) were most represented, while 18-24year group (9.1%) was least. Three-quarters were females, and 190 (36.8%) patients had associated psycho-morbidities.

CTs and MRIs were the only scans adopted (4:1 and 1:1 for first and repeat scans, respectively). Twelve (11.0%) scans had findings likely to explain the headaches after the initial scans, with no difference in findings between diagnoses from CTs and MRIs (*P*=0.41). Repeat scans offered no additional benefits, and roughly one-in-three patients were referred to third-party carers (mostly neurologists). Those aged 40-59years had more psycho-morbidities compared to other age groups (OR=1.68; p=0.01), while 40% fewer males had psycho-morbidities relative to females (OR 0.60; p=0.02).

Patients with psycho-morbidities were less likely to have scan findings that explained their headaches (OR=0.22; *P*=0.03), and, though not quite significant, were also more likely to undergo imaging (OR=1.47; *P*=0.08).

**Conclusion**

Significant intracranial findings were uncommon following imaging for headaches, and MRIs offer no advantages over CTs. Repeating head scans within 5years offered no clear benefits. Psycho-morbidities should be considered when deciding the imaging needs, particularly for middle-aged females, given the lesser chance of findings. Larger studies will help validate these findings.