Epidemiology of Headache

Prevalence

- Headaches are the most prevalent neurological disorders and among the most frequent symptoms seen in general practice.
- 50% of the general population have headaches during any given year, and more than 90% report a lifetime history of headache.
- The average lifetime prevalence of migraine is 18%, and the estimated average prevalence in the past year is 13%.
- The prevalence of migraine in children and adolescents is 7.7%.
- Tension-type headache is more common than migraine, with a lifetime prevalence of about 52%. However, only frequent or chronic tension-type headaches are disabling.
- 3% of the general population have chronic headache, i.e., a headache ≥15 days per month. They are the most severely disabled.

Sexual Dimorphism

- The sex ratio for lifetime migraine remains stable at 2–3 females for 1 male and is generally consistent across countries.
- The female preponderance of headaches emerges at puberty, with females having a 1.5-fold greater risk of headaches and 1.7-fold greater risk of migraine than male children and adolescents.
- There is an equal sex ratio for tension-type headache prevalence.

Heritability

- A family history of migraine is one of the most potent and consistent risk factors for migraine.
- The results of twin studies suggest that genetic factors underlie approximately one-third of the familial clustering of migraine.
- In familial hemiplegic migraine, mutations in a single gene cause the disease.

The common forms of migraine, with or without aura, are complex genetic disorders where multiple genetic polymorphisms determine a “migraine threshold.” Several of these genetic fingerprints have recently been identified on various chromosomes in genome-wide association studies.

Comorbidity

- Migraine is strongly associated with anxiety and mood disorders, allergies, chronic pain disorders, and epilepsy.
- Migraine with aura, but not migraine without aura, is a risk factor for ischemic stroke and silent brain lesions on MRI, particularly in women with frequent attacks.
- Anxiety in childhood is associated with the subsequent development of headache in young adulthood.
- Cyclic vomiting, somnambulism, and travel sickness in childhood are considered “migraine equivalents” and can herald the development of migraine later in life.

Course and Prognosis

- The severity of migraine is variable: 25% of migraineurs experience ≥4 severe attacks per month, 48% have 1–4 severe attacks, and 38% have ≤1 severe attack per month.
- The course of migraine also varies: they remit in 30% of subjects, persist in 45%, and transform into other types of headache in 25%.

- Overall, migraine prevalence decreases after age 50 and in women after menopause, unless estrogen replacement therapy is administered.
- Early age at onset, psychosocial stressors, and psychiatric comorbidity may be related to a less favorable outcome.

Impact of Migraine

- 90% of migraineurs have some headache-related disability, and approximately half are severely disabled or require bed rest.
- Abundant evidence indicates that migraine reduces health-related quality of life more than osteoarthritis or diabetes.
- Part of the disability among people with headache can be attributed to comorbid conditions, which therefore need adequate management.
- The financial cost of headache arises partly from direct treatment costs, but much more from loss of work time and productivity. The annual U.S. direct medical costs attributable to migraine were estimated at $1 billion in 1999. In the EC (2004, 15 countries evaluated), the total cost of migraine was estimated at €25 billion per year, the next-highest after dementia among neurological disorders.

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