Clinical Algorithms

Headache

MICHAEL JAMIESON

Headache, although a near universal experience, is a relatively uncommon reason for consultation in general practice. The consultation rate for migraine, for example, is said to be 12 per 1000 consultations, and it is estimated that the average general practitioner will see 28 patients on account of headache yearly.[1]

Most headache is of the migrainous or tension type. Fry estimates that less than 1% of headaches presenting to a general practitioner reflect "major intracranial disease."[2] Despite its predominantly benign nature, headache may, however, be the presenting feature of potentially serious conditions such as cerebral tumour, meningitis, giant cell arteritis, and glaucoma. Cervical spondylosis, chronic sinusitis, and refractory errors probably cause headache less often than is commonly supposed.

Classification

A useful classification is that of the National Institute of Neurological Disease and Blindness 1962.[3] This is summarised below.

(1) Vascular headache of migraine type:
- A Classic migraine,
- B Common migraine,
- C Cluster headache,
- D Hemiplegic and ophthalmoplegic migraine,
- E "Lower half" headache.

(2) Muscle contraction headache.

(3) Combined headache: vascular and muscle contraction.

(4) Headache of nasal vasomotor reaction.

(5) Headache of delusional, conversional, or hypochondriacal states.

(6) Non-migrainous vascular headaches:
- A Systemic infections,
- B Miscellaneous disorders.

(7) Traction headache:
- A Primary or metastatic tumours of meninges, vessels, or brain,
- B Haematomas,
- C Abscesses,
- D Postlumbar puncture headache,
- E Pseudotumour cerebri.

(8) Headache due to overt cranial inflammation:
- A Intracranial,
- B Extracranial (arteritis, cellulitis).

(9) Headache due to disease of ocular structures.

(10) Headache due to disease of aural structures.

(11) Headache due to disease of nasal and sinusal structures.

(12) Headache due to disease of dental structures.

(13) Headache due to disease of other cranial and neck structures.

(14) Cranial neuritides (trauma, new growth, inflammation).

(15) Cranial neuralgias.

Diagnosis

History—Try to discover why the patient is presenting now. In many cases, particularly of acute onset headache, the reason will be clear. In a considerable proportion of cases of longstanding headache the consultation will have been precipitated by other factors. In particular, look for any underlying anxiety or depression. Attempt to elicit obvious pointers to specific causes (detailed in the classification and algorithm). From the history it is often not possible to differentiate serious from more benign causes. Features such as intensity, response to head movement and to vasoactive drugs, and the presence of a tender cervical spine with diminished movement do not have discriminating value. There are, however, certain uncommon alerting features, which again do not clearly discriminate but which should give rise to suspicion of in particular an expanding intracranial lesion. These are: (*a*) sleep disturbance, (b) paroxysmal headache, (*c*) cough headache.[4]

Examination—One cannot be dogmatic about the approach to examination in general practice. Nevertheless, it is reasonable to measure the blood pressure in all cases. In older patients examination of the superficial temporal arteries and of the intraocular tension would be appropriate. Examination will, on the whole, be guided by the history.

Investigations—There is no indication for routine investigation, other than the erythrocyte sedimentation rate in the older patient.

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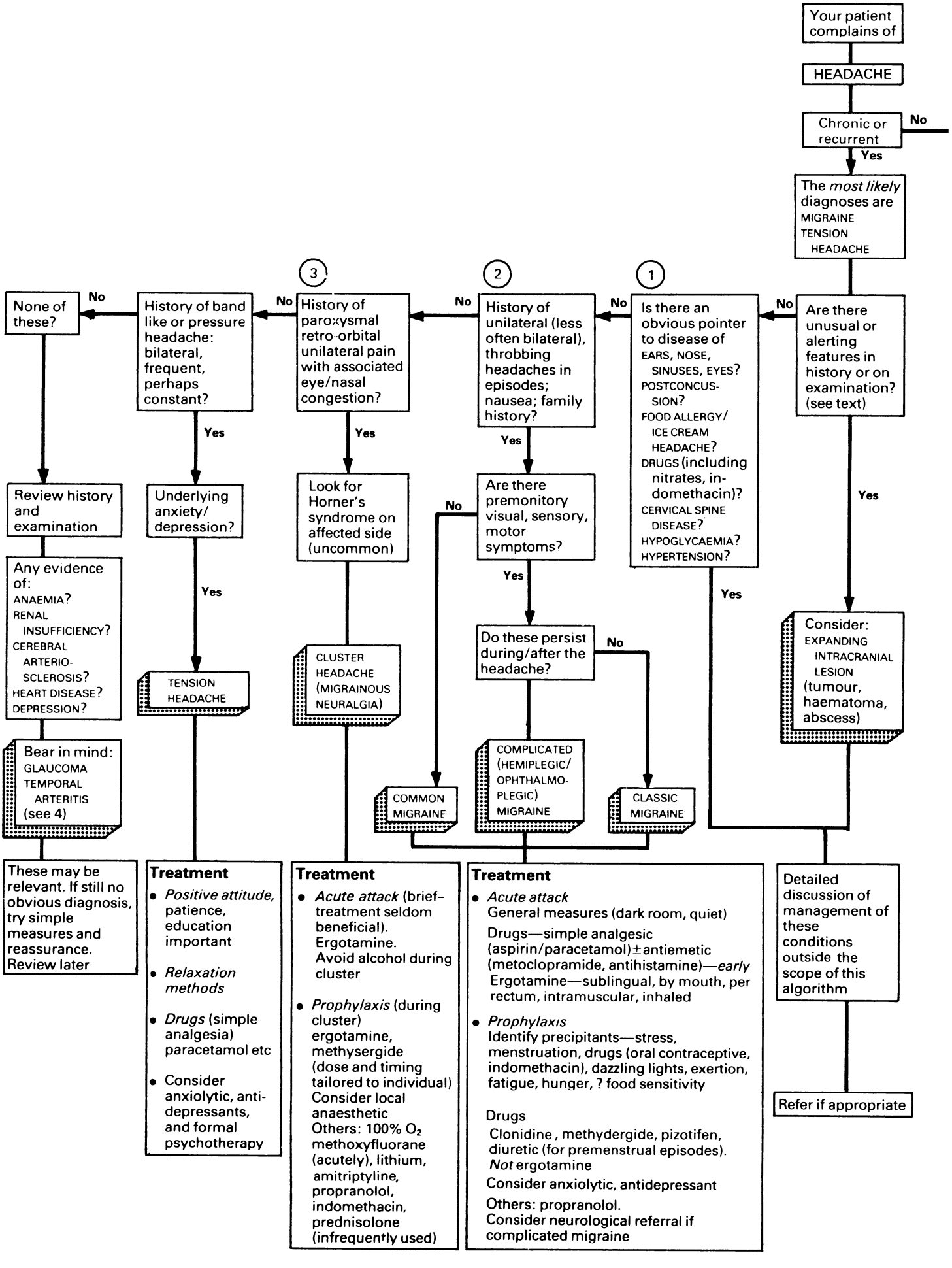
[1] Royal College of General Practitioners/Office of Population Censuses and Surveys 1974. *Morbidity statistics from general practice: second national study 1970-71*. London: HMSO, 1974. Studies on Medical and Population Subjects No 26.

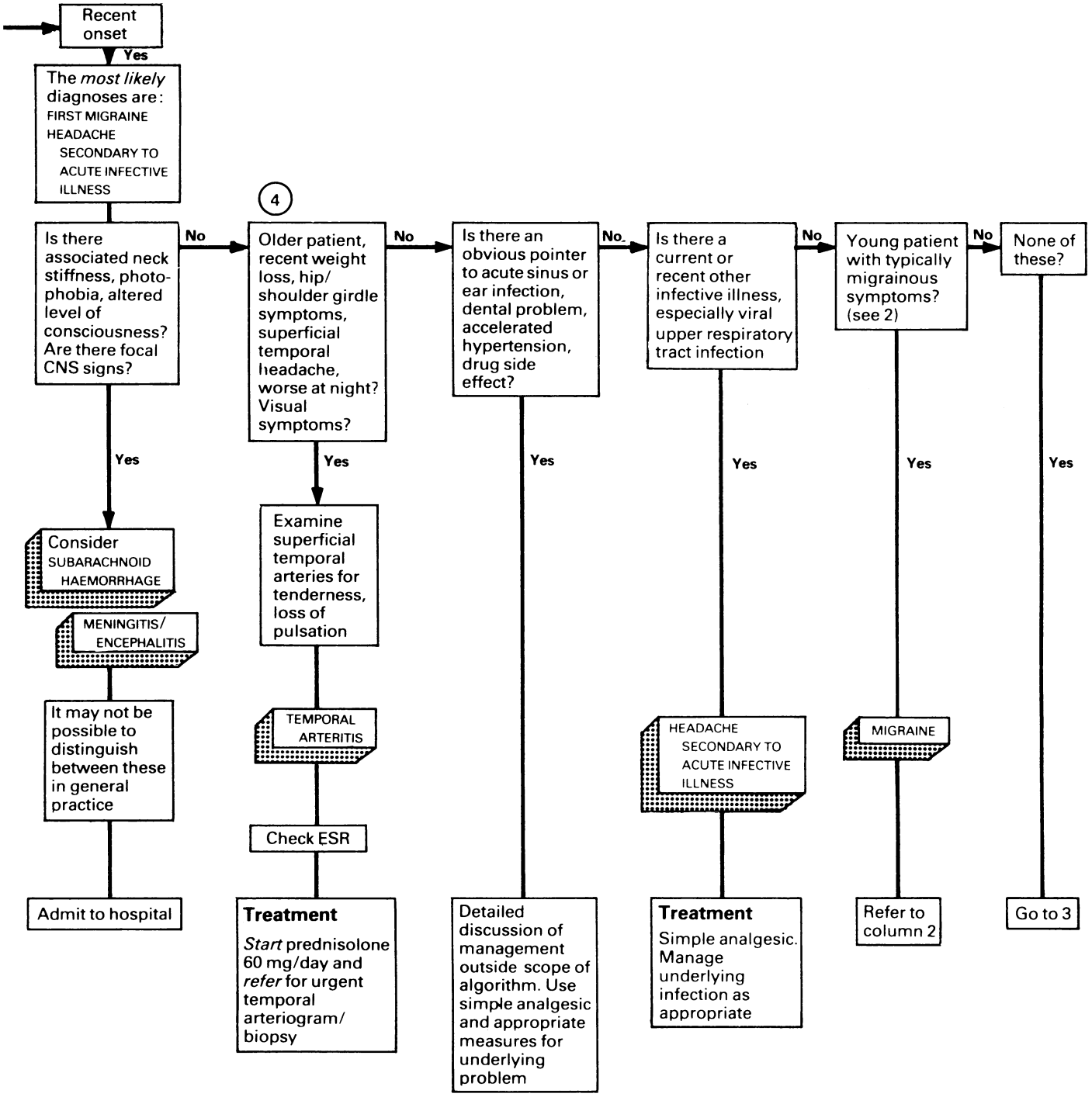
[2] Fry J. *Common diseases, their nature, incidence and care*. 2nd ed. Lancaster: MTP Press Ltd, 1979.

[3] Vinken PJ, Bruyn GW. *Handbook of clinical neurology 5: headaches and cranial neuralgias*. Amsterdam: North Holland Publishing Company, 1968.

[4] Raskin NH, Appenzeller O. *Headache*. Philadelphia, WB Saunders, 1980. (Major problems in internal medicine; vol 19.)


Your patient complains of
HEADACHE
Chronic or recurrent
No
Yes
The most likely diagnoses are
MIGRAINE
TENSION HEADACHE
Are there unusual or alerting features in history or on examination? (see text)
No
Yes
Consider:
EXPANDING INTRACRANIAL LESION (tumour, haematoma, abscess)
1
Is there an obvious pointer to disease of
EARS, NOSE, SINUSES, EYES?
POSTCONCUSSION?
FOOD ALLERGY/ ICE CREAM HEADACHE?
DRUGS (including nitrates, indomethacin)?
CERVICAL SPINE DISEASE?
HYPOGLYCAEMIA?
HYPERTENSION?
No
Yes
2
History of unilateral (less often bilateral), throbbing headaches in episodes; nausea; family history?
No
Yes
Are there premonitory visual, sensory, motor symptoms?
No
Yes
Do these persist during/after the headache?
No
Yes
COMMON MIGRAINE
COMPLICATED (HEMIPLEGIC/ OPHTHALMOPLEGIC) MIGRAINE
CLASSIC MIGRAINE
3
History of paroxysmal retro-orbital unilateral pain with associated eye/nasal congestion?
No
Yes
Look for Horner's syndrome on affected side (uncommon)
CLUSTER HEADACHE (MIGRAINOUS NEURALGIA)
History of band like or pressure headache: bilateral, frequent, perhaps constant?
No
Yes
Underlying anxiety/ depression?
Yes
TENSION HEADACHE
None of these?
No
Review history and examination
Any evidence of:
ANAEMIA?
RENAL INSUFFICIENCY?
CEREBRAL ARTERIOSCLEROSIS?
HEART DISEASE?
DEPRESSION?
Bear in mind:
GLAUCOMA
TEMPORAL ARTERITIS
(see 4)
These may be relevant. If still no obvious diagnosis, try simple measures and reassurance. Review later
Treatment
• Positive attitude, patience, education important
• Relaxation methods
• Drugs (simple analgesia) paracetamol etc
• Consider anxiolytic, antidepressants, and formal psychotherapy
Treatment
• Acute attack (brief-treatment seldom beneficial). Ergotamine. Avoid alcohol during cluster
• Prophylaxis (during cluster) ergotamine, methysergide (dose and timing tailored to individual) Consider local anaesthetic Others: 100% O_2 methoxyfluorane (acutely), lithium, amitriptyline, propranolol, indomethacin, prednisolone (infrequently used)
Treatment
• Acute attack
General measures (dark room, quiet)
Drugs—simple analgesic (aspirin/paracetamol)±antiemetic (metoclopramide, antihistamine)—early
Ergotamine—sublingual, by mouth, per rectum, intramuscular, inhaled
• Prophylaxis
Identify precipitants—stress, menstruation, drugs (oral contraceptive, indomethacin), dazzling lights, exertion, fatigue, hunger, ? food sensitivity
Drugs
Clonidine, methydergide, pizotifen, diuretic (for premenstrual episodes). Not ergotamine
Consider anxiolytic, antidepressant
Others: propranolol.
Consider neurological referral if complicated migraine
Detailed discussion of management of these conditions outside the scope of this algorithm
Refer if appropriate

Headache


Recent onset
Yes
The most likely diagnoses are:
FIRST MIGRAINE
HEADACHE SECONDARY TO ACUTE INFECTIVE ILLNESS
Is there associated neck stiffness, photophobia, altered level of consciousness? Are there focal CNS signs?
No
Yes
4
Older patient, recent weight loss, hip/shoulder girdle symptoms, superficial temporal headache, worse at night? Visual symptoms?
No
Yes
Is there an obvious pointer to acute sinus or ear infection, dental problem, accelerated hypertension, drug side effect?
No
Yes
Is there a current or recent other infective illness, especially viral upper respiratory tract infection
No
Yes
Young patient with typically migrainous symptoms? (see 2)
No
Yes
None of these?
Yes
Consider SUBARACHNOID HAEMORRHAGE
MENINGITIS/ ENCEPHALITIS
It may not be possible to distinguish between these in general practice
Admit to hospital
Examine superficial temporal arteries for tenderness, loss of pulsation
TEMPORAL ARTERITIS
Check ESR
Treatment
Start prednisolone 60 mg/day and refer for urgent temporal arteriogram/ biopsy
Detailed discussion of management outside scope of algorithm. Use simple analgesic and appropriate measures for underlying problem
HEADACHE SECONDARY TO ACUTE INFECTIVE ILLNESS
Treatment
Simple analgesic. Manage underlying infection as appropriate
MIGRAINE
Refer to column 2
Go to 3