CHRONIC HEADACHE

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INTRODUCTION

- It is a common complaint which can be a symptom of many underlying disorders
- Prevalence of headache in Malaysia ranges from 9.0% (migraine), tension headache (26.5%) and other types of headache (28.2%)[1]

1. Alders EEA, Hentzen A, Tan CT. A Community-Based Prevalence :Study on Headache in Malaysia. Headache: The Journal of Head and Face Pain. 1996;36(6):379-384.

DEFINITION

- **Chronic headache** is defined on the basis of frequency (≥15 days per month) and duration (≥4 hours per headache day) over the period of 3 months[2]

2. Society HCCotIH. The International Classification of Headache Disorders, 3rd edition (beta version). Cephalalgia. 2013;33(9):629-808.

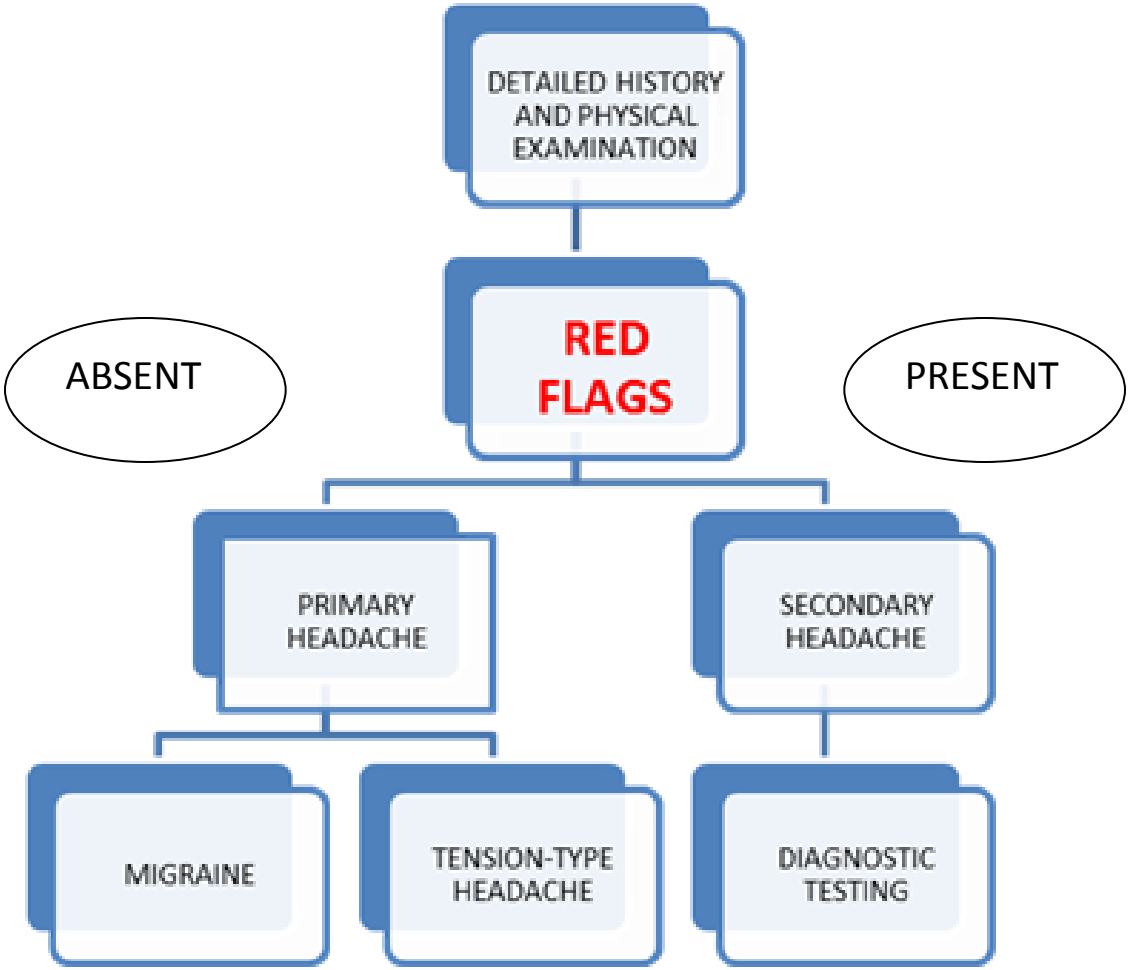
Case 1

- 15/M/girl – presented with right sided headache x2/7

Case 1 (cont)

- How would you approach this patient?
  - ✓Further history (need to check for red flags)
  - ✓Details physical examination

Flow Chart for assessment of Chronic Headache[3]



3. Society AH. Headache diagnosis and testing

RED FLAGS[4]

Red flags	Possible diagnoses
1) Age of onset (> 50 years old)	Mass lesion, temporal arteritis
2) Types - New onset of severe headache in pregnancy or postpartum - Rapid onset with strenuous exercise - Sudden onset (maximal intensity occurs within seconds to minutes, thunderclap headache)	- Cortical vein/cranial sinus thrombosis, carotid artery dissection, pituitary apoplexy - Carotid artery dissection, intracranial bleed - Bleeding into a mass or arteriovenous malformation, mass lesion (especially posterior fossa), subarachnoid hemorrhage
3) Nature of headache - First or worst headache of the patient's life - Focal neurologic signs (not typical aura)	- Central nervous system infection, intracranial haemorrhage - Arteriovenous malformation, collagen vascular disease, intracranial mass lesion

4. Hainer BL, Matheson EM. Approach to acute headache in adults. American family physician. 2013;87(10):682-687

Red flags	Possible diagnoses
- Headache triggered by cough or exertion, or while engaged in sexual intercourse	- Mass lesion, subarachnoid haemorrhage
- Headache with change in personality, mental status, level of consciousness	- Central nervous system infection, intracerebral bleed, mass lesion
- Worsening pattern	- History of medication overuse, mass lesion, subdural hematoma
4) Physical examination - Papilledema	- Encephalitis, mass lesion, meningitis, pseudotumor
- Neck stiffness or meningismus	- Meningitis
- Tenderness over temporal artery	- Polymyalgia rheumatica, temporal arteritis
5) Other comorbids - Systemic illness with headache (fever, rash)	- Arteritis, collagen vascular disease, encephalitis, meningitis
- New headache type in a patient with: Cancer/ HIV/ Lyme disease	- Metastasis/ Opportunistic infection, tumor/ Meningoencephalitis

CLASSIFICATION[2]

Primary headache	Secondary headache
• Migraine • Tension-type headache (TTH) • Others primary headache disorders (e.g. cold stimulus headache)	• Trauma/injury • Cranial/cervical vascular disorder • Non-vascular intracranial disorder • Substance use or its withdrawal • Infection • Disorder of homeostasis • Disorder of the cranium, neck, eyes, ears, nose, sinuses, teeth, mouth or other facial or cervical structures • Psychiatric disorder (e.g. depression)

Case 1 (cont)

- **Further history:**
  - desribed as throbbing in nature, a/w photophobia and nausea, no vomiting.
  - Severity of 5-6/10
  - relieved slightly after rest/sleep
  - She has been having similar attack for the past one year with frequency of 2 attacks in last year
  - No changes in nature of headache
  - Absence of red flags

- More than 90% of headache is accounted for migraine and tension-type headache[5]

5. Rasmussen BK, Jensen R, Schroll M, et al. Epidemiology of headache in a general population—A prevalence study. Journal of Clinical Epidemiology.44(11):1147-1157.

- Differentiation between these headache is as below: [6]

	TENSION-TYPE HEADACHE	MIGRAINE
NATURE	Tight gripping pressure, constant	Throbbing, pulsating
SITE	Bitemporal, occipital or generalised	Unilateral
ASSOCIATED FEATURES	± Blurred vision ± Nausea A/w sleep disturbance	Nausea / vomiting Photophobia Phonophobia Osmophobia
PRECIPITATING FACTORS	Often with stress	Often after stress Smells Foods Alcohol Hormonal changes

6. Beran R. Management of chronic headache. Australian Family Physician. 2014;43:106-110.

Case 1 (cont)

- **On examination:**
  - Alert, conscious
  - BP 130/70, PR 88
  - Mild-mod pain
  - Pupil reactive
  - f/copy: no papilledema
  - No neurological deficit
  - Lungs/CVS: normal
  - Visual acuity: 6/6 both eyes

EXAMINATION AND ASSESSMENT

PHYSICAL EXAMINATION	DIAGNOSIS
Funduscopy	Increased intracranial pressure (tumour, hemorrhage)
Visual acuity	Visual disturbance (myopia)
Blood pressure measurement	Hypertension, increased ICP, SOL
Full examination of head and neck including neurological, ENT and cervical spine	CNS pathology, ENT pathology, cervicogenic headache

7. Whittaker N ea. Headache in Primary care. New Zealand: Best Practice 2007:10-24

Case 1 (cont)

- What investigations would you like to order?

DIAGNOSTIC TESTING

INVESTIGATION	DIAGNOSIS
BLOOD TEST	
- **ESR and/or CRP**	Giant cell arteritis
RADIOLOGY	
- **CT**	Subarachnoid haemorrhage
- **MRI**	Intracranial abnormalities
SPECIAL TESTS	
- **Lumbar puncture**	Subarachnoid haemorrhage
- **EEG**	Consider in: LOC, residual focal defects/encephalopathy, atypical migrainous aura

8. Duncan CW, Watson DPB, Stein A. Diagnosis and management of headache in adults: summary of SIGN guideline 2008

Case 1 (cont)

- **Impression:**
  - Chronic migraine without aura, infrequent attack

- **Treatment for this patient**
  - Paracetamol 1gm QID x5/7
  - TCA stat if symptoms worsening or increase frequency
  - Not for prophylaxis yet as infrequent attack

TREATMENT

- **Non-pharmacological**
  - Management of predisposing factors; screening using DASS
  - Identification of Triggering Factors and Avoidance
  - Relaxation Training, Biofeedback, and Cognitive Behavioural Therapy (CBT)
  - Acupuncture

TREATMENT (cont)

- **Pharmacological**
  - Simple analgesia is acceptable for headache which occur less frequently than once every fortnight.
    - Paracetamol
    - NSAIDS – ibuprofen, mefenamic acid, diclofenac, naproxen, etc
  - Anti-emetic agents - metoclopramide
  - Specific anti-migraine drugs
    - Triptans – sumatriptan
    - Ergotamine
    - Others (pizotifen)

PROPHYLAXIS TREATMENT

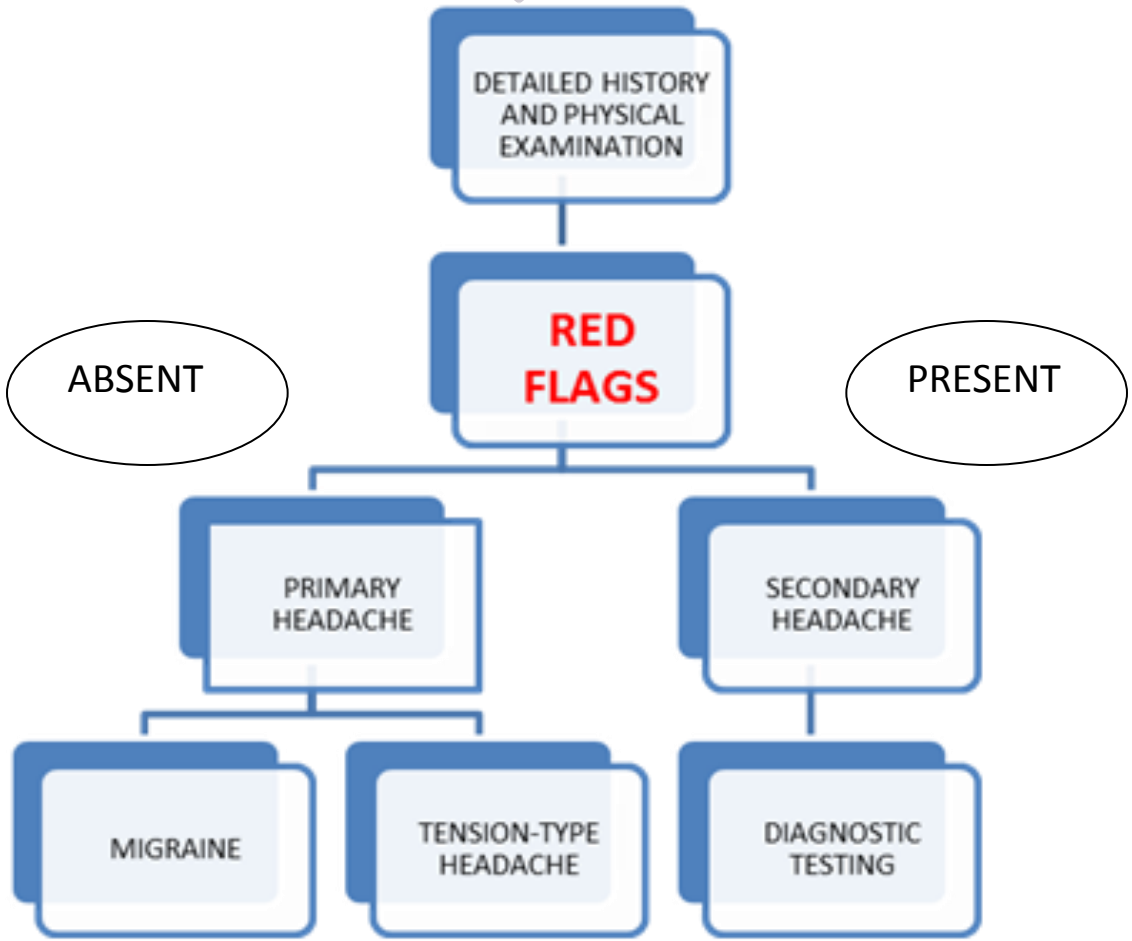
- For patients with migraine:
  - Beta blockers (propranolol)
  - Tricyclics (amitriptyline)
  - Sodium valproate

Case 2

- 38/lady came with c/o headache for the past 5/7

- How to approach this patient?
  - ✓Detail history
  - ✓Full physical examination

Flow Chart for assessment of Chronic Headache[3]



3. Society AH. Headache diagnosis and testing

Case 2 (cont)

- **Further history**
  - Also having dizziness with nausea and vomiting x2-3/7
  - Patient denied photophobia/fever/neck stiffness
  - PMH: HIV diagnosed 7 years ago but not on regular follow-up or treatment

Case 2 (cont)

- **Physical examination**
  - Patient was febrile, alert, awake, and oriented
  - Vital signs were normal
  - There were no signs of meningeal irritation
  - Examination of the fundus revealed bilateral papilledema
  - The remainder of the examination was normal

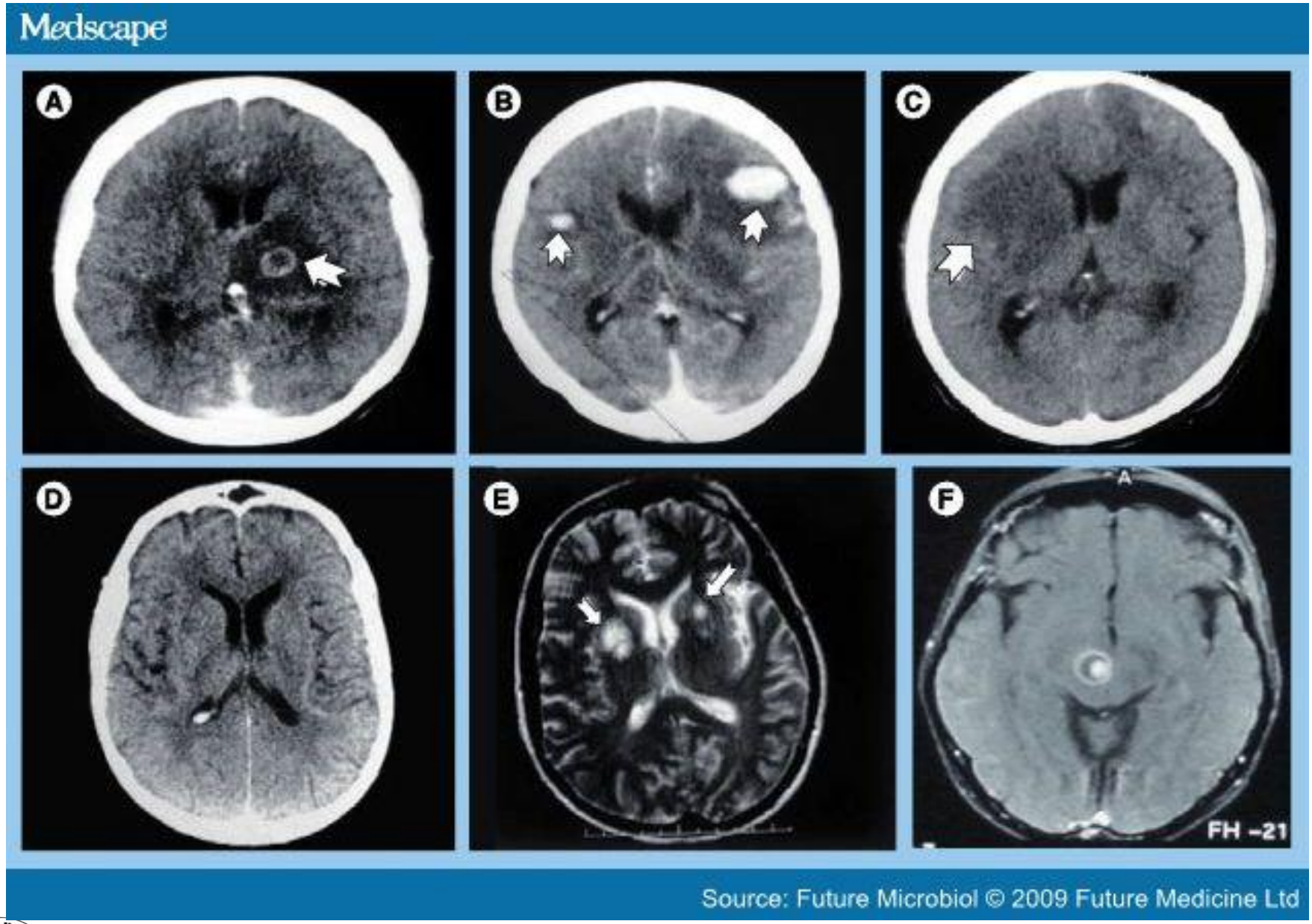
Case 2 (cont)

- **Important investigations**
  - FBC : normal

- **What else would you like to order?**
- **Should this patient be referred to hospital?**

Case 2 (cont)

- **Other investigations**
  - CT of the brain without contrast: a space-occupying lesion in the bilateral temporoparietal regions
  - CT of the head with contrast: showed bilateral temporoparietal brain masses.
  - MRI of the brain with contrast demonstrated ring-enhancing lesions with adjacent edema in the bilateral temporoparietal regions


Medscape
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- **Other relevant investigations**
  - Baseline IgG and IgM levels for Toxoplasma gondii were 19.2 mg/dL and 0.25 mg/dL, respectively
  - CD4+ count was 15 cells/µL, and the most recent viral load was approximately 300,000 copies/mL

When to refer?

- **PRESENCE OF RED FLAGS**

Case 2 (cont)

- **Diagnosis: cerebral toxoplasmosis**
- **Management:**
  - 200-mg loading dose of pyrimethamine was given, then continued with a regimen containing pyrimethamine (75 mg/day), sulfadiazine (1500 mg 4 times daily), and leucovorin (10 mg/day)
  - After 5 days, she was completely asymptomatic and was discharged
  - Treatment was continued for 6 weeks
  - She was started on her antiretroviral regimen 2 weeks after discharge
  - Repeat MRI of the brain with contrast 1 month after the diagnosis showed that the lesion had resolved completely