HEADACHE AND MIGRAINE

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DISCLOSURES AND CONFLICTS OF INTEREST

- nothing

RED FLAGS FOR SECONDARY HEADACHE

- Neurologic deficits
- New headache in elderly
- Positional component
- Fever/meningism
- Recent head trauma
- Pregnancy

- Get head imaging/refer to ED

EPIDEMIOLOGY OF PRIMARY HEADACHE

- Lifetime prevalence is 66-96%
  - Active prevalence within last year is 40%
- 3:1 female predominance

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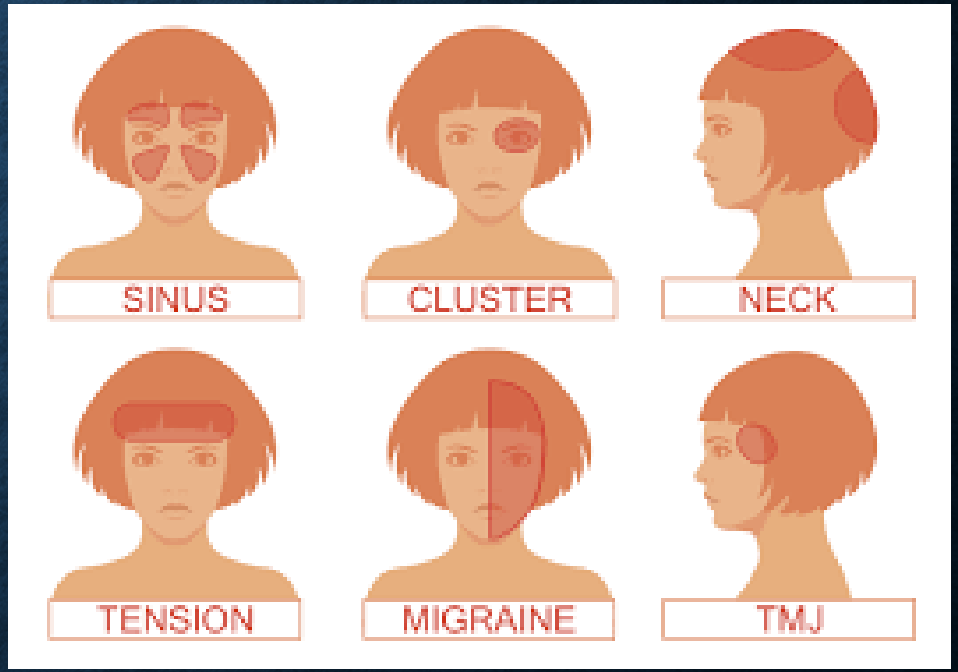
MAJOR TYPES OF PRIMARY HEADACHE

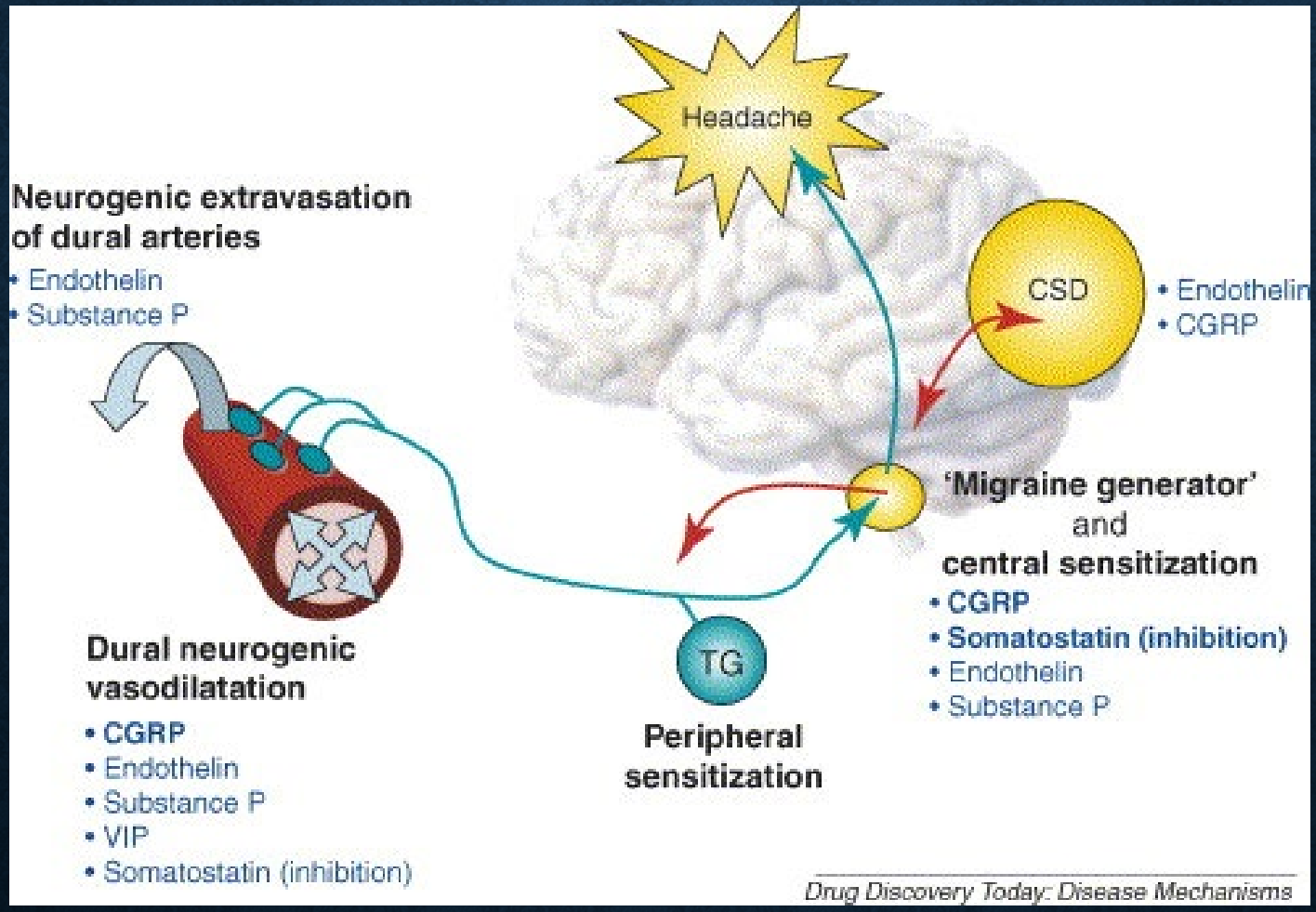
- Common (90% of all headaches)
  - Migraine
  - Tension
- Rare
  - Cluster
  - Trigeminal Autonomic Cephalgias (includes cluster)
  - Headache associated with sexual activity
  - Hypnic headache
  - Occipital neuralgia
  - …



MIGRAINE

- Classically unilateral, throbbing accompanied by nausea, photophobia
- Numerous triggers reported but difficult to confirm
  - Estrogen
  - Poor sleep
  - Caffeine
  - ?foods, environmental allergens
- With or without aura (or just aura)
- Genetic component

MIGRAINE


Headache
Neurogenic extravasation of dural arteries
• Endothelin
• Substance P
CSD
• Endothelin
• CGRP
'Migraine generator' and central sensitization
• CGRP
• Somatostatin (inhibition)
• Endothelin
• Substance P
Dural neurogenic vasodilatation
• CGRP
• Endothelin
• Substance P
• VIP
• Somatostatin (inhibition)
TG
Peripheral sensitization
Drug Discovery Today: Disease Mechanisms

EPIDEMIOLOGY OF MIGRAINE

- ~12% of population episodic (<14 per month)
  - 90% of migraine sufferers report moderate to severe pain
  - 75% reporting impaired function
  - 33% require bed rest during an attack.
  - accounts for 20% of work absences

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EPIDEMIOLOGY OF MIGRAINE

- ~ 3% of population chronic (>14 per month)
  - "associated with higher disability/impact, medical and psychiatric comorbidities, health care resource use, direct and indirect costs, lower socioeconomic status, and health-related quality of life."
- 1 in 4 migraineurs are candidates for preventive therapy

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TENSION

- Bilateral, non-throbbing, without other features

MANAGEMENT OF HEADACHES

- Rule out red flags
- As most chronic headaches are migraine or tension, management strategy is similar for all patients

MANAGEMENT OF HEADACHES

- Non-prescription
  - Lifestyle
    - Exercise, healthy diet, sleep hygiene,
  - MSK interventions
    - Massage, acupuncture, physiotherapy
  - OTC supplements
    - Magnesium 400mg daily
    - Riboflavin (B2) 400mg daily

MANAGEMENT OF HEADACHES

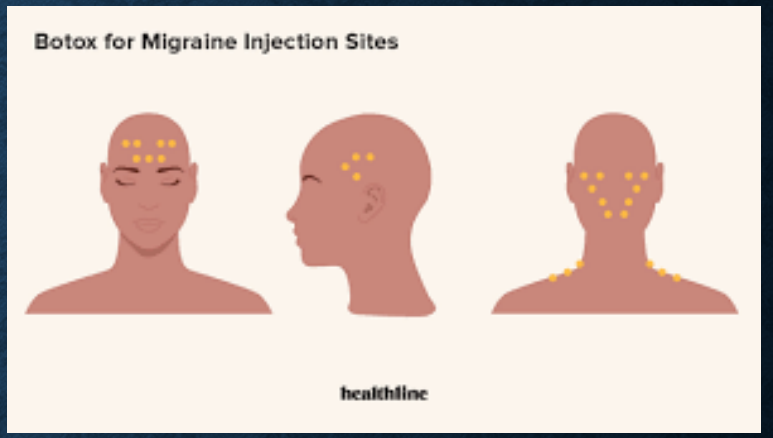
- Abortive
  - Acetaminophen
  - NSAIDs
    - Ibuprofen
    - Ketorolac
    - Diclofenac (Cambia)
  - Triptans (any)
  - Anti-emetics
    - Metoclopramide
    - Ondansetron
  - Prednisone/dexamethasone

MANAGEMENT OF HEADACHES

- Prophylactic
  - Amitriptyline/nortriptyline (10-100mg qhs)
  - Propranolol (10mg BID – 80mg TID)
  - Topiramate (25mg daily – 100mg BID)
  - Gabapentin (100mg qhs – 900mg TID)

- Many Many More Tablets
  - Valproate, verapamil, ACE inhibitors, SNRI (venlafaxine/duloxetine), memantine,
  - Consider progesterone only OCP
- Cranial nerve stimulators – limited evidence
- CBT therapy

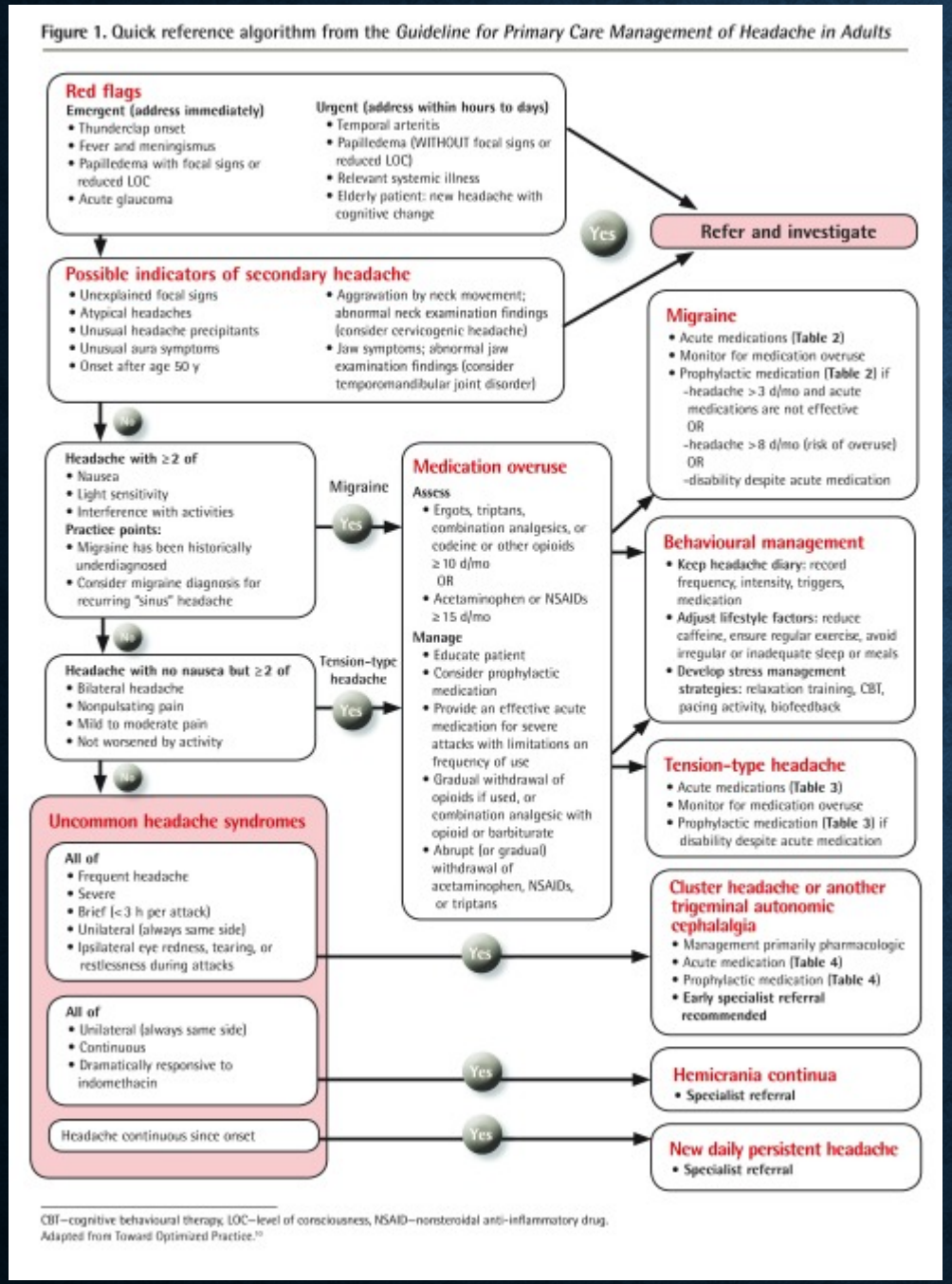
MANAGEMENT OF HEADACHES



- Next steps
  - Botulinum toxin (Botox)
  - CGRP inhibitors (Aimovig, Emgality, Ajovy, Qulipta)
    - Not covered by Pharmacare
    - Most private insurance requires 14+ headaches per month and failure of 2 prophylactic medication classes

SUMMARY

- Headaches and Migraines are ***very*** common
- Rule out red flags
- Lifestyle management
- Abortive therapy with OTC meds and triptans
- Preventive therapy with amitriptyline, propranolol and/or topiramate
- Then consider botulinum toxin or CGRP inhibitors



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QUESTIONS/DISCUSSION