BASH GPwSI Meeting

Dr Louise Rusk

Hyperaldosteronism

- **Definition:**
- A condition characterized by excess production of aldosterone by the adrenal glands.
- **Types:**
- **Primary Hyperaldosteronism (Conn’s Syndrome)**
  - Caused by adrenal adenoma or bilateral adrenal hyperplasia.
  - Independent of renin-angiotensin system.
- **Secondary Hyperaldosteronism**
  - Due to increased renin production (e.g., renal artery stenosis, heart failure).
  - Aldosterone increases in response to RAAS activation.
- **Pathophysiology:**
- Aldosterone → ↑ Na^+ & water retention, ↓ K^+ excretion → hypertension & hypokalemia.

Clinical Features, Diagnosis & Treatment

- **Clinical Features:**
- Hypertension (often resistant)
- Hypokalemia → muscle weakness, cramps
- Metabolic alkalosis
- Fatigue, headache
- **Diagnosis:**
- **Screening:** ↑ Aldosterone:Renin Ratio (ARR)
- **Confirmatory tests:** Saline infusion test, oral sodium loading
- **Imaging:** CT/MRI of adrenals
- **Adrenal vein sampling** to distinguish unilateral vs bilateral disease

- **Treatment:**
- **Unilateral (e.g., adenoma):** Surgical adrenalectomy
- **Bilateral:** Medical therapy (e.g., **spironolactone**, **eplerenone**)
- Manage hypertension & correct electrolyte imbalance

When should I worry about BP in headache?

Malignant Hypertension

- BP 180/120
- With retinal hemorrhages +/- papilloedema refer same day assessment

NICE CKS: Hypertension. Accessed Feb 2025

Pre-eclampsia

- BP 140/80 → secondary care assessment
- After 20 weeks of pregnancy
- And associated symptoms

- If 160/110 will be admitted for monitoring

NICE CKS: Pre-eclampsia. Accessed Feb 2025

When should I worry about BP in headache?

Phaeochromocytoma

- Hypertension (80-90%)
- Headache, palpitation, anxiety, sweating
- Can be normotensive (small but significant number)
- BP sustained or paroxysmal pattern

Initial investigations

- 24 hour urinary catecholamines and metanephrines (x2)
- Plasma metanephrines (if screening for hereditary phaeo)
- Further Ix eg CT/MRI via specialist endocrine service

Zuber et al Hypertension in phaeochromocytoma: Characteristics and Treatment, Endocrinol Metab Clin North Am 2012

NICE CKS Hypertension (updated September 25)

- **Definitions & diagnosis**
- Hypertension: Clinic BP ≥ 140/90 mmHg **and** either
  - Mean daytime ambulatory BP ≥ 135/85 mmHg **or**
  - Home BP monitoring average ≥ 135/85 mmHg.
- “High normal” or “elevated” BP: values between normal and hypertension (e.g., 120-139/80-89 mmHg)
  - Stage 1 – clinic BP 140/90 – 159/99 and ABPM/HBPM 135/85-149/94
  - Stage 2 – clinic BP160/100-182/120 and ABPM/HBMP ≥150/95
  - Stage 3 – clinic SBP 180 or higher **or** DBP 120 or higher

Investigating for target organ damage

- Dipstick - Haematuria
- Urine ACR
- HbA1c
- U+E
- Fundi
- ECG (LVH)
- Lipids, QRisk3 (statin if >10%)

Suspect **secondary** hypertension if

- <40 yo
- Accelerated HTN
- Features in History, examination or investigations point to an underlying cause
- Consider current medication as a possible cause for raised BP

- If confirmed hypertension and one or more of: target-organ damage, established CVD, renal disease, diabetes, or 10-year CVD risk sufficiently high → offer drug treatment.
- If none of the above but BP ≥ 140/90 (clinic) or corresponding ABPM/HBPM high → consider drug treatment after discussion of risks/benefits.
- Shared decision-making is emphasised: discuss treatment options, side-effects, patient preferences.

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Migraine and the risk of incident hypertension among women

Pamela M Rist [1,*], Anke C Winter [2,*], Julie E Buring [1], Howard D Sesso [1], Tobias Kurth [1,3]

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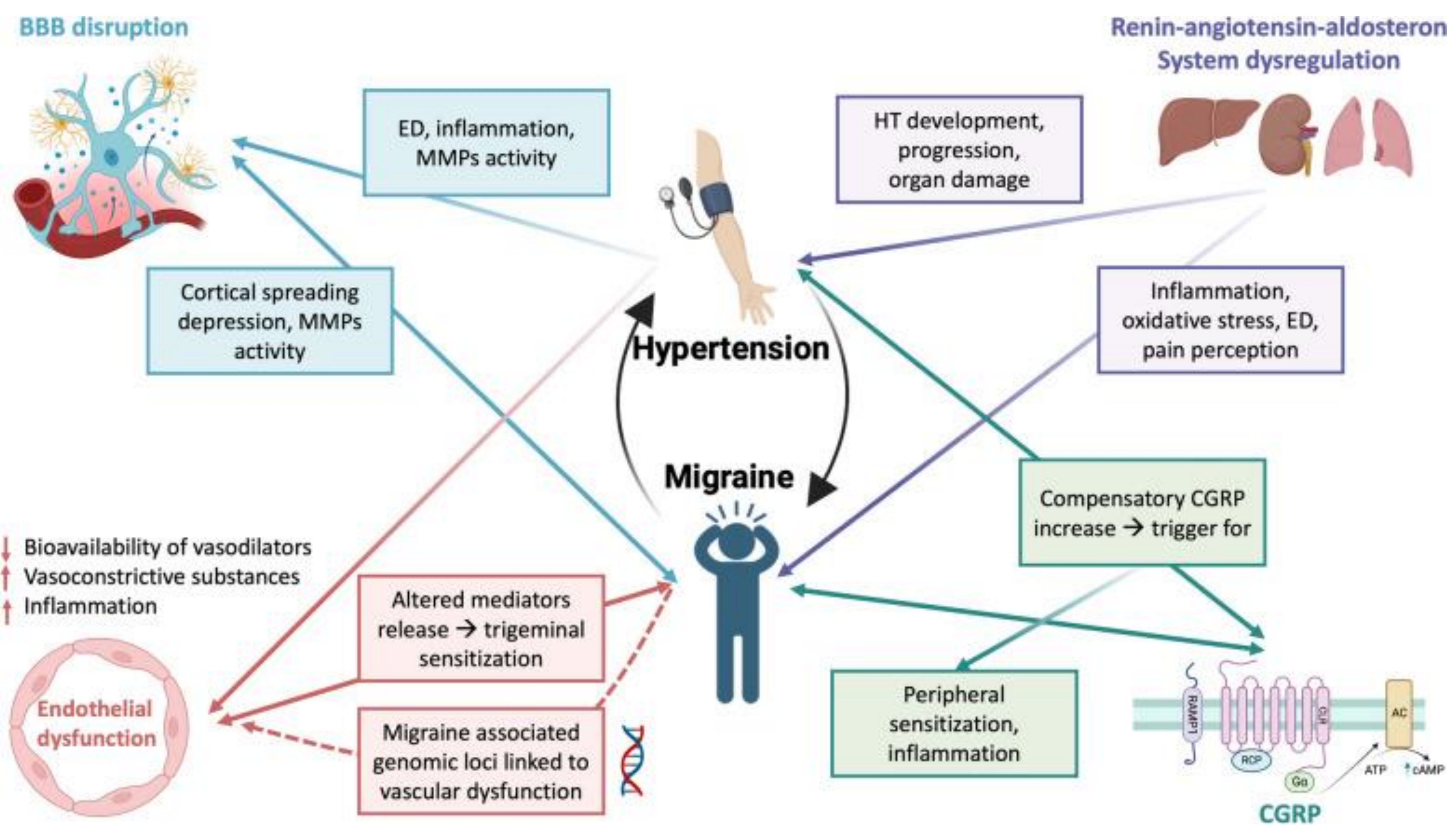
PMCID: PMC6026578 NIHMSID: NIHMS931593 PMID: 29388437



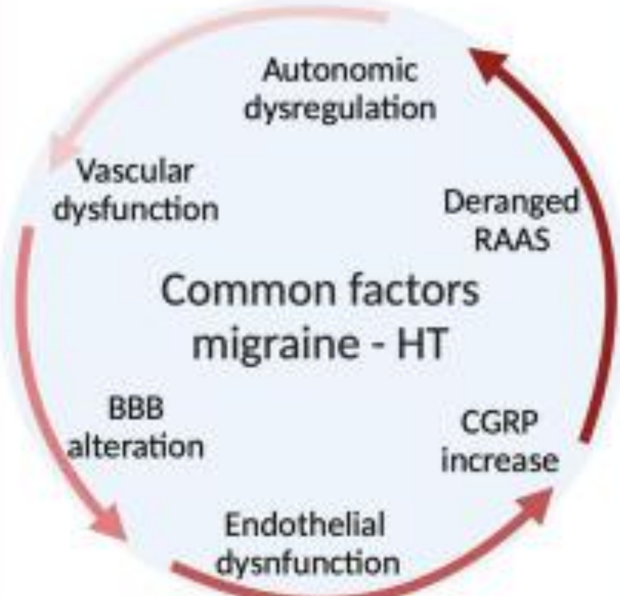
Massacane et al, Journal of Headache and Pain (2024) 25:13

Episodic migraine

Risk factors modifiable / non modifiable

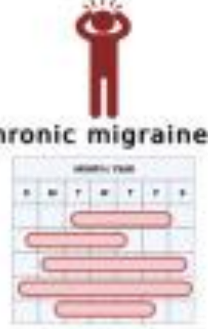
- Hypertension (HT)
- Headache frequency
- Medication overuse
- Depression

- Socioeconomic status
- Female gender
- Obesity
- Major life events
- Non-cephalic pain
- Head and neck injuries
- Insomnia
- Snoring



Biological mechanisms

- Central sensitization
- Descending pain modulation areas dysfunction
- Trigeminal system hypersensitivity
- Increased cortical excitability
- Chronic neurogenic inflammation
- ... yet to be determined



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ARTICLES · Volume 24, Issue 10, P817-827, October 2025

Candesartan versus placebo for migraine prevention in patients with episodic migraine: a randomised, triple-blind, placebo-controlled, phase 2 trial

Lise Rystad Øie, PhD [a,c,d] · Tore Wergeland, PhD [a,c,d] · Øyvind Salvesen, PhD [e] · G∅ril Bruvik Gravdahl, MSc [a,c,d] · Irina Aschehoug, MSc [a,d] · Prof Sasha Gulati, PhD [b,d] · et al.
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> Sci Rep. 2021 Feb 15;11(1):3846. doi: 10.1038/s41598-021-83508-2.

Real world effectiveness and tolerability of candesartan in the treatment of migraine: a retrospective cohort study

Carmen Sánchez-Rodríguez [1], Álvaro Sierra [2], Álvaro Planchuelo-Gómez [3], Enrique Martínez-Pías [2], Ángel L Guerrero [4] [5] [6], David García-Azorín [2] [7]

Affiliations + expand

PMID: 33589682 PMCID: PMC7884682 DOI: 10.1038/s41598-021-83508-2

Other migraine prophylaxis

- Propranolol – nonselective BB, useful for migraine, BP, anxiety/panic
- Lisinopril
- Verapamil – may also be of benefit for mood stability

- And be mindful of women stage of life - ?cOCP ?HRT

What about CGRP?

- Calcitonin gene-related peptide (CGRP) antagonists are generally considered safe for people with hypertension, but caution is warranted
- Anti-CGRP monoclonal antibodies and small molecule antagonists are thought not significantly increase blood pressure in the general population or in patients without pre-existing hypertension
- However, patients with baseline hypertension may experience a small but persistent increase in blood pressure or require escalation in antihypertensive therapy during CGRP antagonist treatment
- What are your practices around this?

Thank you