PIPADOR REVISION

MRCOG Part 1 Revision Notes

Conn's Disease (Primary Aldosteronism)

ENDOCRINOLOGY • LECTURE 195

VISUAL EXAMINATION REVISION NOTES

2026 Edition

MRCOG PART 1 REVISION NOTES | ENDOCRINOLOGY

195 Conn's Disease (Primary Aldosteronism)

Pathophysiology, diagnosis and its limitations in pregnancy, effect of pregnancy and management

5–10%	≈ 1/3	↓ Renin	Spironolactone
Of hypertensive patients	Have hypokalaemia	Hallmark (ARR ↑)	AVOID in pregnancy (anti-androgen)

■ KEY FACTS: Learning objectives

- Describe the causes, pathophysiology and features of primary aldosteronism.
- Describe screening and confirmation and their limitations in pregnancy.
- Describe the effect of pregnancy on the disease and its management.

195.1 Pathophysiology

Autonomous aldosterone: **adrenal adenoma (Conn's)** ≈ 30–40% or **bilateral hyperplasia** ≈ 60% ▶ ↑ ENaC Na^+ reabsorption ▶ Volume expansion → **hypertension**; **renin suppressed** ▶ ↑ K^+ and H^+ excretion → **hypokalaemia, metabolic alkalosis** ▶ Cardiovascular/renal damage beyond BP effect

Rarer causes: familial hyperaldosteronism (glucocorticoid-remediable — CYP11B1/B2 chimeric gene), adrenal carcinoma. Suspect in **resistant hypertension**, hypertension with **hypokalaemia** (spontaneous or diuretic-induced), adrenal incidentaloma, early-onset hypertension.

195.2 Diagnosis

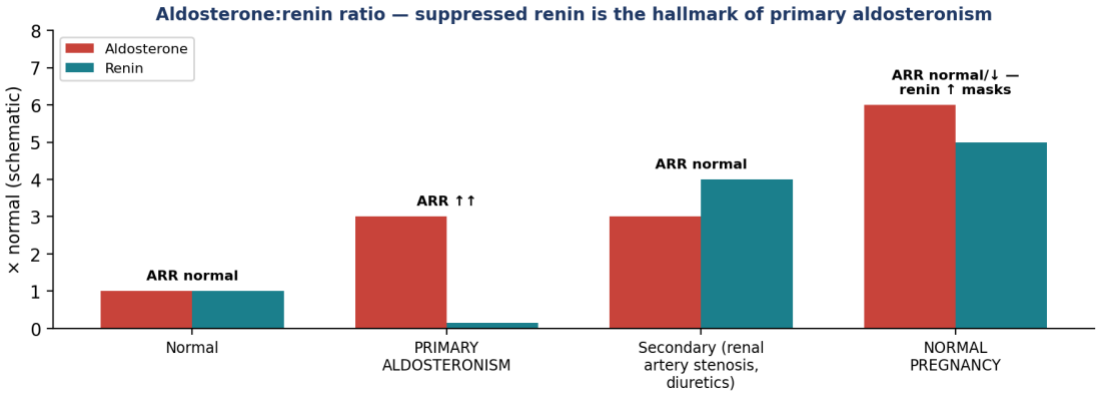


Figure 195.1 — Aldosterone:renin ratio patterns

Step	Non-pregnant	Pregnancy
Screen	Aldosterone:renin ratio (correct K^+; stop interfering drugs if possible)	ARR unreliable — renin ↑ physiologically; a suppressed renin with high aldosterone is still suggestive
Confirm	Saline infusion, captopril or fludrocortisone suppression tests	Usually deferred (volume loading risks); diagnose on clinical grounds
Subtype	Adrenal CT, adrenal vein sampling	Defer imaging/AVS until postpartum (MRI if essential)

195.3 Pregnancy

- Course is variable: **progesterone** (anti-mineralocorticoid) may **improve** BP and K^+ in some; others **worsen** (↑ pre-eclampsia).
- Risks: **superimposed pre-eclampsia**, placental abruption, FGR, preterm birth, maternal hypokalaemic arrhythmia.
- Usually diagnosed before or after pregnancy; new diagnosis in pregnancy is uncommon.

Management	Notes
Antihypertensives	Labetalol, nifedipine, methyldopa (standard pregnancy agents); amiloride (ENaC blocker) acceptable
Spironolactone	Avoid — anti-androgenic, risk of feminisation of a male fetus; eplerenone (more selective) used in case reports when needed
Potassium	Oral supplementation; monitor
Surgery	Laparoscopic adrenalectomy in the 2nd trimester for a unilateral adenoma with uncontrolled disease
Postpartum	Complete work-up; spironolactone is compatible with breastfeeding; aspirin from 12 wk in future pregnancies (chronic hypertension)

195.4 Must-know summary

■ EXAM TIP

- Commonest endocrine cause of hypertension; adenoma (Conn's) vs **bilateral hyperplasia**; only ≈ 1/3 hypokalaemic.
- **High aldosterone + suppressed renin**; pregnancy ↑ renin → ARR unreliable.
- Progesterone may ameliorate; pre-eclampsia risk ↑.
- Avoid spironolactone (male fetal feminisation); labetalol, nifedipine, amiloride; surgery in 2nd trimester.

■ MNEMONIC / MEMORY AID

Conn's — 'High BP, Low K, Low renin'.