

Quick-reference summary — Secondary hypertension in young adults

de Freminville et al., Hypertension 2024;81:2340–2349

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Domain	Key finding / clinical pearl
Clinical question	How common is secondary hypertension (2HTN) in hypertensive adults aged 18–40 , what causes it, and can clinical features identify a sufficiently low-risk group not requiring investigation?
Design	Cross-sectional, 2 French tertiary hypertension centres ; consecutive referrals underwent systematic secondary HTN work-up, including biochemical/hormonal testing and abdominal CT/MR angiography.
Population	2,090 patients , age 18–40 with confirmed HTN; mean age at HTN diagnosis 29.8 y .
Headline result	619/2,090 (29.6%) had secondary HTN — approximately 1 in 3 .
Most common cause	Primary aldosteronism (PA): 339 cases , accounting for 54.8% of all secondary HTN .
Other causes	Renovascular 18.4% → primary kidney disease 12.9% → pheochromocytoma/functional paraganglioma 6.0% → drugs/substances 5.2% → other 2.7% .
Renovascular pearl	Fibromuscular dysplasia accounted for 85 cases (~4.1% of the total cohort).
Mild HTN ≠ low risk	Secondary HTN remained common with BP <160/100 mmHg , irrespective of number of antihypertensive drugs.
Age	Surprisingly, prevalence was higher at 30–40 vs 18–30 y: 32.4% vs 27.2% (P=0.024) , mainly due to more PA.
Sex	Secondary HTN was more frequent in women: 34.4% vs 24.3% in men .
Strong predictors	Hypokalaemia , ≥2 antihypertensives, female sex, absence of family history, lower BMI, and diabetes were associated with greater likelihood of secondary HTN.
Hypokalaemia	Particularly informative: K <3.5 mmol/L was present in 31.5% of secondary vs 13.4% of primary HTN ; multivariable OR 3.57 .
≥2 medications	Multivariable OR for secondary HTN 2.21 .
Important negative finding	BP severity itself was not useful for identifying a low-risk population. Neither office BP nor out-of-office BP predicted secondary HTN.
Missed by selective screening	35.2% of patients ultimately diagnosed with secondary HTN lacked the usual clinical/biochemical screening triggers. Even when young age was the only indication , prevalence remained ~ 23% .
Authors’ conclusion	All hypertensive adults <40 should be screened for secondary causes, regardless of BP level.

Causes — remember

“A-R-R-P-D”

Aldosteronism **54.8%** → Renovascular **18.4%** → Renal disease **12.9%** → PPGL **6.0%** → Drugs/substances **5.2%**.

What changes practice?

The key challenge to conventional selective screening is that **young patients with apparently uncomplicated or relatively mild hypertension still had substantial secondary disease**. In particular, a normal potassium, non-resistant HTN, and BP below severe thresholds **did not reliably exclude secondary hypertension**. PA dominates the diagnostic yield.

Major caveat

The **29.6% should not automatically be interpreted as the prevalence in community/primary-care young hypertensive patients**. These were patients referred to tertiary hypertension centres, creating substantial potential for **referral/selection bias**. The authors acknowledge this. Conversely, screening was unusually systematic and some causes—particularly **obstructive sleep apnoea—were not systematically assessed**, so their definition did not capture every possible secondary cause.

Bottom line: In a systematically investigated tertiary-care cohort of hypertensive adults aged 18–40, **~30% had secondary HTN, >50% of which was PA, and no clinically reassuring subgroup had sufficiently low prevalence to confidently avoid screening**. The study therefore argues for **routine secondary-cause screening in all hypertensive patients <40**, while its tertiary-centre design limits direct generalisation of the 30% prevalence estimate.