



COULD MY NEW HYPERTENSIVE PATIENT HAVE PRIMARY ALDOSTERONISM?

PRACTITIONER QUESTIONS

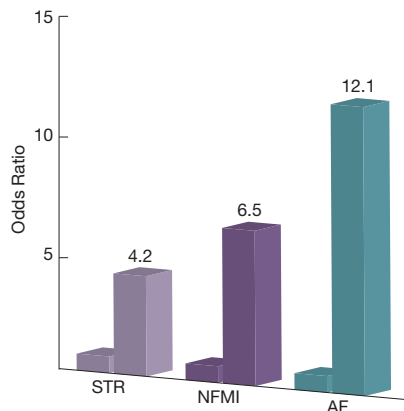
Q. WHY SHOULD I READ THIS, AND KEEP IT ON MY DESK?

- A. Because fewer than 1 in 100 hypertensives are ever screened, let alone properly treated, for PA.

Q. WHY DOES THIS MATTER?

- A. Two reasons:
- 5%-13% of hypertensives have PA
 - PA has a much higher CVS risk profile than age-, sex-, and BP-matched essential hypertensives. (see chart)

INCREASED RISK PROFILE OF PRIMARY ALDOSTERONISM COMPARED WITH ESSENTIAL HYPERTENSION.



STR=stroke; NFMI=non-fatal myocardial infarction; AF=atrial fibrillation

Data from Milliez P, Girerd X, Plouin P-F, et al. *J Am Coll Cardiol* 2005; 45(8):1243-1248

Q. WHAT AS A PCP SHOULD I DO FOR HYPERTENSIVE PATIENTS?

- A. First, look at the Endocrine Society's recommendations for screening hypertensive patients.
- We recommend case detection of primary aldosteronism (PA) in patients with sustained blood pressure (BP) above 150/100 mm Hg on each of three measurements obtained on different days; with hypertension (BP > 140/90 mm Hg) resistant to three conventional antihypertensive drugs (including a diuretic); or controlled BP (< 140/90 mm Hg) on four or more antihypertensive drugs; hypertension and spontaneous or diuretic-induced hypokalemia; hypertension and adrenal incidentaloma; hypertension and sleep apnea; hypertension and a family history of early onset hypertension or cerebrovascular accident at a young age (< 40 years); and all hypertensive first-degree relatives of patients with PA.*

Q. IDEALLY ALL THESE PATIENTS SHOULD BE SCREENED: WHERE DO I START?

- A. With your most at-risk patients (hypokalemia, BP 160/110, under 40, or resistant hypertension), and measure their plasma renin. If PRA < 1.0 ng/mL/h or DRC < 15 mU/L, get the patient to come back.

Q. IF I SUSPECT MY PATIENT HAS PA, WHAT NOW?

- A. You need to talk to the patient about PA,
- First, your labs—very low renin—means you may well be making too much aldosterone from your adrenal glands.
 - Second, I think you should be seen by a specialist, either at a Hypertension Center or an Endocrinologist.
 - Third, if the diagnosis of primary aldosteronism is established, there's a roughly 50:50 chance its coming from one of the two adrenal glands or from both.
 - Fourth, if it's coming from one side, it's almost always from a benign (not malignant, slow growing, doesn't spread) tumor called an adenoma.
 - Fifth, if this is the case, the best treatment is to take that adrenal out: in half of the cases, that's it—normal BP, no more meds; in the other half, a reduced number of meds to get your blood pressure back to normal.
 - Sixth, if both adrenals are making too much aldosterone, you'll be prescribed a specific med to counteract the effects of the excess aldosterone.
 - Seventh, although it's clear that if you've got one-sided PA surgery is the best option (it's very safe, and very effective), it's a long process to get there.

If you need further information, access the guideline at <https://doi.org/10.1210/jc.2015-4061>



SOME ANSWERS TO YOUR PATIENTS' QUESTIONS

Q. NOW IT'S MY TURN TO ASK SOME QUESTIONS, WHAT MAKES THE PROCESS SO LONG?

- A.
- First, any blood pressure meds may need to be adjusted for a month or so before additional testing.
 - Second, if your aldosterone to renin ratio is higher than normal, you may (depending on age) have a second, confirmatory test: It's usually just a day at the medical centre.
 - Third, you have a CT scan to see if there is an adenoma in the adrenal gland on one or the other side, and to rule out adrenal cancer (which is very rare).
 - Fourth, except on the very young with very high levels of aldosterone and an adenoma on CT, you'll need adrenal venous sampling to determine whether one or both sides are involved: as you get older, there are more and more 'non-functioning' adenomas, so they have to be sure.

Q. WHAT HAPPENS IF I DON'T HAVE THE TIME (OR MONEY) TO GO THROUGH ALL THIS?

- A. Two things in response. First, in the long term, the meds cost more than the work-up and surgery—although if both glands are overproducing aldosterone that's no help in terms of finances.

Q. WHAT HAPPENS IF I CHOSE NOT TO GO THROUGH WITH SURGERY?

- A. I'd add an aldosterone blocking med to those you are already taking. It's a low dose, and I'll keep checking your BP, plasma potassium, and kidney function. I'll also keep you informed about what's happening in the field, because there are researchers out there trying very hard to simplify and streamline the very complicated current pathway.

Q. WHAT'S THE ADDITIONAL MEDICATION?

- A. It's called spironolactone, and it acts to block aldosterone where it works, in the kidney and on blood vessels.

Q. DOES IT HAVE SIDE EFFECTS?

- A. If you do your own research online, it's routinely frightening, as pharma tries to cover all possible bases. The real answer is yes, but not often at the low dose I'm going to prescribe (25mg/day, half a 25mg tablet each day, or what might be easier or 25mg three days a week, say M/W/F). If you're post-menopausal, the only (very rare) effect is breast tenderness; if you're male a small minority develop gynecomastia. More common causes of gynecomastia are age, overweight, and alcohol. On the plus side, it clearly lowers the risk of prostate cancer.

Q. WHY DIDN'T SOMEONE TELL ME ABOUT ALL THIS YEARS AGO?

- A. Because we used to think PA was a rare and relatively benign form of hypertension, and now we know that neither is the case.

Q. HOW REAL IS THE DANGER IF I'M NOT TREATED?

- A. I'll show you the results of the first study to look at this. As you can see, PA patients have a much higher (4-12 fold) cardiovascular risk profile than age-, sex- and BP-matched so-called essential hypertensives.

Q. THAT LOOKS PRETTY TERRIBLE, BUT I NEED TO THINK AND TALK IT OVER WITH MY FAMILY. CAN I HAVE A COPY OF WHAT YOU'VE BEEN TELLING ME?

- A. Sure: I'll have them give you a copy at the reception desk—and have them also make another appointment for you in a couple of weeks. In the interim you should go on the Endocrine Society's patient portal (<http://www.hormone.org/diseases-and-conditions/adrenal/primary-aldosteronism>) and have a look at what it says there.

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