

Guest Editorial



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Quarter Doses of Four Agents as Initial Therapy to Lower Blood Pressure Bruce Soloway, MD, reviewing Chow CK et al. *Lancet* 2021 Sep 18 A low-dose combination pill was more effective than full-dose irbesartan alone as initial treatment. Most patients with hypertension are started on monotherapy, and many remain on monotherapy even when blood pressure (BP) control is inadequate, due to factors such as treatment inertia and concerns about adverse effects and costs. Studies of individual antihypertensive medications suggest that benefits outweigh side effects at low medication doses. Australian researchers randomized almost 600 adults with hypertension (either untreated or receiving monotherapy) to daily “quadpills” that contained one quarter of the standard doses of four antihypertensive agents (i.e., 37.5-mg irbesartan, 1.25-mg amlodipine, 0.625-mg indapamide, and 2.5-mg bisoprolol) or to daily monotherapy with 150-mg irbesartan. Clinicians were free to escalate treatment, initially adding 5-mg amlodipine, if BP was not controlled adequately. After 12 weeks, treatment had been escalated in 40% of monotherapy patients and in 15% of quadpill patients. Mean systolic BP was 7 mm Hg lower in the quadpill group, and significantly more quadpill patients had BP <140/90 mm Hg (76% vs. 58%). In a subset of 400 patients who were followed for 12 months, treatment escalation continued to occur more frequently in the monotherapy group (44% vs. 26%), and mean systolic BP continued to be 8 mm Hg lower and BP control rates remained higher in the quadpill group. Adverse events were similar in both groups.

COMMENT Starting antihypertensive treatment with low-dose quadpills might be simpler and more effective than titrating doses of multiple agents. Improved cardiovascular outcomes seem likely but have not yet been demonstrated. Many inexpensive two-drug combination pills, and several fairly expensive three-drug combination pills, currently are available in the U.S. Researchers found an independent relation between the triglyceride-glucose (TyG) index and thoracic-aorta intima-media thickness (IMT), an early marker of subclinical atherosclerosis in patients without atherosclerotic cardiovascular disease (ASCVD). They concluded that the TyG index can be used to identify otherwise healthy patients at increased risk for ASCVD. Increased TyG index is associated with a greater risk for diabetes, stroke, and coronary artery disease in healthy individuals, and it might be correlated with asymptomatic carotid artery atherosclerosis. An IMT greater than 1.5 mm has been associated with an increased risk for coronary artery disease and stroke. TyG, an independent marker of insulin resistance, is easily calculated from fasting glucose and triglyceride levels, making it a potentially valuable tool for clinical practice. **Why This Matters** This study is the first to show an independent relation between the TyG index and thoracic-aorta IMT. The TyG index could be used as a relatively simple, noninvasive test to predict cardiovascular risk as an initial alternative to more complex studies, such as carotid ultrasound or echocardiography.