

Dear Clinicians,

Independence Day always gets me thinking about history! The history of hypertension treatment is undergoing a subtle change. Did you notice that in the recent SPRINT trial drug formulary, the commonly used hydrochlorothiazide (HCTZ) was not included? Instead, the lesser used thiazide-type diuretic (chlorthalidone (CTD)) was recommended in the formulary. The tide is indeed changing. In the early 2000's, > 95% of thiazide diuretics being sold were HCTZ. We now know that CTD has improved BP lowering and more evidence for event reduction than HCTZ. How did HCTZ grab such a huge share of the market? Well, even though CTD were approved by the FDA at virtually the same time in the late 50's/early 60's, HCTZ was put on the formulary of the most famous revolutionary trial in hypertension: the VA Cooperative trials. These trials showed unbelievable reductions in cardiovascular events using HCTZ (and other less used anti-hypertensives). HCTZ rode on the coat-tails of these trials for the next half century. Now, with recent trials and retrospective analysis, it is clear that CTD outperforms HCTZ. Why is this? While the daytime difference in BP lowering is not much different between HCTZ and CTD, 24 hr pharmacokinetic now demonstrates that HCTZ is not a great 24-hour drug. Chlorthalidone, with its vastly longer half-life, provides 24-hr BP lowering effects. Should we stop using HCTZ completely? No. Current combination drugs use HCTZ as the diuretic of choice. HCTZ in combination with ACE-inhibitors and ARBs provide excellent BP lowering effects. However, as monotherapy, please consider CTD. Finally, it looks like the future is here! The first modern combination drug with CTD was recently introduced; it is a combination with an ARB (azilsartan-CTD aka edarbyclor™). And so ends this review of the history of the most famous anti-hypertensive of them all! Farewell HCTZ !

We welcome your feedback and look forward to hearing from you – please send us your comments and questions!

If you have specific questions related to hypertension management in your patients, Dr. Williams can be reached by email at Stephen.Williams@nyumc.org or by phone at 646-320-8075 (cell).

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