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Refractory Hypertension: Prevalence, Apparent Versus True and Prognosis

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Refractory Hypertension

Refractory Hypertension, also referred to as a refractory hypertensive state, Rf HTN, or status angiotensus, may be a hypertensive condition which may occur, for no apparent reason, in patients with previously well-managed hypertension. Refractory hypertension is characterized by a vital sign that is still uncontrolled on maximal or near-maximal therapy, which is that the use of ≥ 5 antihypertensive agents of various classes, including a long-acting thiazide-like diuretic (such as chlorthalidone) and spironolactone. Patients with refractory hypertension typically exhibit increased sympathetic systema nervosum activity. The phenotype of refractory hypertension was first proposed during a retrospective analysis of patients mentioned the University of Alabama at Birmingham Hypertension Clinic whose vital sign couldn't be controlled on any antihypertensive regimen.

Prevalence

Estimates of prevalence of the phenotype of refractory hypertension are limited to 4 published studies. The studies are consistent in indicating that refractory hypertension is rare, especially if the more rigorous definition that needs patients to fail intensive antihypertensive diuretic treatment that has chlorthalidone and spironolactone is applied. within the retrospective analysis by Acelajado et al,6 of the 304 consecutive patients with resistant hypertension included within the analysis, only 29 or 9.5% never achieved vital sign control when being treated during a hypertension specialty clinic. within the follow-up prospective analysis from an equivalent clinic, only 3% of the 559 patients originally referred for uncontrolled resistant hypertension were diagnosed with refractory hypertension.7 a crucial distinction between these 2 studies that likely explain the lower prevalence of refractory hypertension within the prospective analysis is that the latter study specifically required the utilization of chlorthalidone 25 mg and spironolactone 25 mg daily before defining a patient as being refractory to treatment, whereas within the earlier study, retrospective analysis had no such requirement. Many of the patients within the earlier retrospective study received hydrochlorothiazide, instead of chlorthalidone, and only 80% received spironolactone.6 In contrast, by definition; all of the participants within the prospective study received both agents. As suggested by the authors, underutilization of chlorthalidone and spironolactone likely contributed importantly to lower control rates, and thereby, the upper prevalence of refractory hypertension within the earlier study.

Apparent Versus True

The term apparent refractory hypertension, as against true refractory hypertension is employed by investigators to ask patients with resistant hypertension supported the amount of prescribed medications, without accounting for common causes of pseudo-resistance, ie, inaccurate vital sign measurements, nonadherence, undertreatment, or white-coat effects. These phenomena are well understood in resistant hypertension, but not in refractory hypertension. The white-coat effect is reportedly far more prevalent in Rf HTN than in resistant hypertension, but the opposite causes of apparent resistant hypertension remain unstudied in refractory hypertension. Specifically, none of the studies of refractory hypertension has reported adherence supported measurement of drug or drug metabolite levels in serum or urine.

Prognosis

No study assessing the prognosis of patients with refractory hypertension has yet been reported. Although it seems intuitive that patients whose vital sign can't be controlled will fare more poorly than those whose vital sign is controlled, albeit it requires the utilization of multiple medications, evidence of such increased risk is currently unavailable.

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