Response to Pharmacological Therapy for Hypertensive Children: An “Additional Bypass” of Lifestyle Interventions

In response to the queries raised by Thomopoulos et al,1 regarding our pediatric publication,2 we wanted to first clarify that we are certainly in agreement that diet and lifestyle modifications should be the initial strategy in treating obese children with hypertension. However, it must be conceded that lifestyle modifications are not always successful in reducing body mass index to recommended levels and, despite the introduction of new pediatric guidelines over the last few years for the treatment of obesity, childhood obesity continues to be a national health issue. Furthermore, although there are some comprehensive pediatric weight-loss programs in the United States, they remain very limited in number, which greatly restricts access to such programs for the majority of children. Consequently, alternative antihypertensive strategies are necessary when such programs are unavailable or lifestyle modifications prove insufficient.

Although we wish that we could have addressed many pertinent issues regarding pediatric treatment guidelines and hypertension management strategies, the purpose of our study was not to present a set of clinical practice guidelines for the treatment of hypertension but rather to conduct a clinical trial in response to a written request by the US Food and Drug Administration. More specifically, the US Food and Drug Administration asked that we evaluate for the first time the safety and efficacy of olmesartan medoxomil in reducing blood pressure (BP) in children and adolescents with hypertension. Thus, there was no requirement for lifestyle modifications to be used as initial therapy, nor was it our intention to present a comprehensive treatment algorithm for treating pediatric hypertension. Our study design fulfilled the US Food and Drug Administration request and demonstrated that olmesartan medoxomil was effective in reducing BP in children and adolescents of different races who had either elevated BP or previously diagnosed and/or treated hypertension.

In response to specific queries raised by Thomopoulos et al,1 we would first like to mention that 35% of cohort A and 21% of cohort B had taken previous antihypertensive medications, and 58% and 39%, respectively, were previously diagnosed with hypertension. These children were withdrawn from medication, and their BP required treatment before randomization. Additionally, local pediatric society definitions for pediatric hypertension were not used, because more universal BP level criteria could be widely applied across different countries in the diagnosis of hypertension. Regarding the issue of left ventricular hypertrophy, it is noteworthy that, when this study started, guidelines did not recommend that echocardiography be routinely performed in children with hypertension. Although guidelines now recommend routine echocardiograms, the criteria for when echocardiography should be performed during the diagnostic process remain unclear. Current guidelines also fail to state whether the definition of hypertension should be lower in children with left ventricular hypertrophy. Finally, although a family history of hypertension was not required for enrollment in our study, we used a less stringent definition of hypertension if there was a family history.

We thank Thomopoulos et al for their interest in our publication and appreciate the opportunity to address their queries and provide additional clarification.

Disclosures

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