The field of transgender medicine is rapidly growing; increased numbers of youth who identify as transgender/gender-diverse (TGD) and nonbinary are seeking medical care and surgical interventions [1,2]. In the past decade, both pediatric and adult centers around the world are reporting not only a marked rise in the number of patients but also a shift in the number of referrals favoring those assigned female at birth [3–5]. As research enhances our knowledge, we are refining our terminology and treatment approaches and also updating our recommendations [6,7]. At present, we are facing a wave of opposition to the treatment of youth with gender dysphoria. There are concerns that necessary medical care for TGD youth could be prohibited in some parts of the country [8]. More than ever, multicenter collaboration and data from large prospective studies involving nonbinary and TGD population such as study a by Millington et al. are invaluable [9].

In this prospective study titled, “Physiologic and metabolic characteristics of a cohort of transgender and gender-diverse youth in the United States,” Millington et al. recruited more than 370 TGD pediatric and adolescent patients from four large centers in the U.S. Within their cohort, there was a slight predominance of participants who were assigned female at birth (62%), which is consistent with trends reported at other centers [3–5]. Baseline anthropometric and laboratory data were collected from 78 subjects before starting pubertal suppression (gonadotropin-releasing hormone analogs) and from 296 subjects before starting gender-affirming hormones (GAH) [9]. The authors plan to follow this cohort prospectively to monitor and describe the outcomes of pubertal suppression and GAH treatment.

The baseline data (height, weight, body mass index, blood pressure, and laboratory measurements) were compared with age-matched National Health and Nutritional Examination Survey comparison group. There was a significant difference in compared populations in terms of race and socioeconomic status, with more white, higher income participants in the study group; however, there was no difference in their body mass index Z-scores, rates of obesity, or tobacco use.

This research data showed that at baseline, mean high-density lipoprotein cholesterol (HDL-C) was significantly lower in the study participants compared with the National Health and Nutritional Examination Survey controls. The decrease in HDL-C can be related to obesity, tobacco use, and low physical activity (PA) level and has a negative impact on cardiovascular and metabolic outcomes in adulthood. The authors postulated that decreased PA was the contributing factor adversely affecting baseline HDL-C in TGD youth from their cohort. They suggested that decreased PA was associated with negative body perception and lack of supportive environments, as reinforced by findings from the two cited publications [10,11]. A recently published survey of high school students from Minnesota found that transgender and gender nonconforming students are less likely to engage in PA compared with their cisgender peers [12]. Another large study from the United Kingdom found that transgender adults had less PA compared with cisgender controls; however, PA activity was higher in transgender individuals on GAH compared with those who were not [13]. This could imply that GAH treatment has beneficial impact on PA, and as a result, on lipid profile.

This novel finding of decreased baseline HDL-C in TGD youth is valuable to providers who should counsel adolescents and their families about the beneficial impact of PA and weight management on increasing HDL-C level. Long-term follow-up of the pediatric population from this cohort and other centers to assess the impact of GAH and other therapies on PA and lipid profile could provide insightful guidance for health care providers.

Kudos to Millington et al. on their joint efforts to prospectively gather relevant information from this large cohort of patients, especially significant because of the comprehensive nature of data collection. Our medical community looks forward to future publications from this group.

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References