Metformin: Should it Play a More Prominent Role in the Treatment of Childhood Obesity?

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Much has been written about the use of metformin for the treatment of adult obesity, but should it play a role in prepubertal or pubertal obese children? Pastor-Villaescusa et al. (10.1542/peds.2016-4285) weigh in with a report of their randomized prospective double-blind placebo-controlled multicenter trial involving 140 obese children, roughly half pre-pubertal and the others pubertal to see if 1 gram/kg of metformin versus placebo reduced the BMI z-score as well as other secondary markers for obesity including insulin resistance, cardiovascular risk, and inflammatory biomarkers. The results are quite interesting in that improvements are seen in the pre-pubertal children compared to controls but not in the pubertal children. So why is this? Could it be pubertal patients with obesity need a bigger dose than that tried in this study? We asked endocrinologist Dr. Paul Kaplowitz to comment on this study and share his thoughts on the findings as reported (10.1542/peds.2017-1205). Before you turn to metformin as a therapy to consider for your obese patients, please note that the drug is not FDA labeled for this indication. Still, we recommend that you digest this study and commentary to understand the potential role of this drug for childhood obesity.

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