Height curves and Height SDS in ADHD children measured before and after stimulant treatment are not affected - observation study in 7172 ADHD children

Doron Carmi*, Uri Gabbay*²,³, Aviva Mimouni-Bloch²,³, BatEl Goldstein⁵, Lital Keinan-Boker⁵,⁶, Stav Bloch⁷, Joseph Meyerovitch²,⁷,⁸
1 - Shoham Community Pediatric Center, Shoham, Clalit Health Services. 2 - Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel. 3 - Quality Unit, Rabin Medical Center, Petach Tikva, Israel. 4 - The Pediatric Neurology and Developmental Unit, Loewenstein Hospital, Raanana, Israel. 5 - School of Public Health, University of Haifa, Haifa, Israel. 6 - Israel Center for Disease Control, Israel Ministry of Health. 7 - Pediatric Community Medicine, Clalit Health Services Head Quarter, Tel-Aviv, Israel. 8 - Schneider children hospital, Petach Tikva, Israel.

Background:
Attention deficit hyperactivity disorder (ADHD) is a common pediatric disorder (3-10%) Stimulants are one of the most used drugs in pediatrics Ongoing debate about growth impairment - Stimulants treatment effect? - Direct effect of ADHD?

Methods:
Historical prospective study Clalit* DB. Compared height in ADHD before & after stimulants. ADHD children 6-17.5 YO (before treatment) A matched non-ADHD control group (age, socioeconomic) Comparison of gender specific median height curves Comparison of gender specific Individual’s height SDS difference (=SDS after - SDS before (stimulant treatment))

*Israeli largest healthcare provider (nearly 5M people)

Results:
7172 ADHD and 16240 non-ADHD controls
Mean initial ADHD age 9.6YO Vs. Control: 10.3YO
ADHD 66% Males Vs. Control: 50%
ADHD low Socioeconomic class: 30% Vs. Control: 33%

The height curves were nearly overlapping in gender specific median height curve of:
- ADHD before treatment
- non-ADHD control
- ADHD after treatment (in both genders)

Conclusions:
No significant effect on linear growth
● Either in early childhood or adolescence period
● Either in ADHD before treatment or after stimulants treatment or in non-ADHD control