

Solriamfetol for attention deficit hyperactivity disorder

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Letter to the Editor

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To the editor:

A 15-year-old male Kuwaiti yungster presented to our out-patient department clinic for subpar scholastic achievement. He has been previously seen in private sector and a diagnosis of attention deficit hyperactivity disorder (ADHD)-inattentive presentation was entertained. He was sequentially trialled on atomoxetine, methylphenidate, add-on clonidine, and venlafaxine with poor outcome. He had normal developmental milestones. He had a history of atopic dermatitis. He keeps only little company that could withstand his moodiness. Remedial teaching and academic support were not helpful. His father has been maintained on paroxetine for recurrent unipolar nonpsychotic major depressive disorder. He had no history of smoking or illicit drug use. Neither did he have a history of head trauma, epilepsy, tics, or toxic exposures. He is morbidly obese (80 kg), and ENT evaluation for possible OSA was unrevealing. Thyroid function tests were within normal as were iron studies. Vitamin D was deficient and he was on replacement therapy. Electroencephalography was done, to exclude a remote possibility of complex partial seizures, and was normal. Psychometry using Vanderbilt Assessment Scales for ADHD were contemplated, both Parents and Teacher Versions, and confirmed ADHD-IA, severe type (8/9 for inattentiveness subscale). Full scale intelligence quotient (FSIQ) measured using Wechsler Intelligence Scale for Children-Third Edition (WISC-III) read 82, with no scatter. Medication chart was revised, treatment adherence was ensured. Apart from over-sedation on clonidine, there was no tolerability issue on previous trials. Genotyping was suggested but not contemplated.

A trial solriamfetol was proposed, parents' informed consent as well as the patient's assent was obtained beforehand. Solriamfetol was commenced at 37.5 mg morning time, increased after 3 days to 75 mg. Two weeks later, a tangible response was reported by the patient. No ADRs were experienced. Dose was then escalated q 3 days to a max of 150 mg. After another 2 weeks, parents' observations in tandem with school reports were very reassuring. Overall scholastic performance was strikingly much better. Vanderbilt was re-administered and documented much lower scores (1/9 for inattentiveness subscale) going hand-in-hand with the obvious clinical and academic accomplishments. Three months have elapsed since then, at time of writing this report, and response is well-sustained with great tolerability. Vital signs (BP, P) remain within normal throughout. Patient lost 6 kg, which was advantageous.

Solriamfetol (Sunosi®) is an Nor-epinephrine Dopamine Reuptake Inhibitor (NDRI), Food and Drug Administration-indicated for hypersomnia in narcolepsy and Obstructive Sleep Apnea (OSA).¹ It is a wakefulness-promoting agent lasting 9 hours with an abuse potential. Mechanism is akin to bupropion which has similarly been used for ADHD.² It has favorable kinetics with renal clearance. Notable side effects, similar to stimulants, include headache, anxiety, appetite suppression and insomnia. This mechanism speaks to a therapeutic potential for ADHD, major depressive disorder, smoking cessation, and binge-eating disorder, but clinical trials are generally lacking.³ No data are available for use in child/adolescent psychiatric population (CAP) population.

Our case is one of the earliest to report a positive efficacy signal of solriamfetol for difficult-to-treat cases of ADHD.⁴ Moreover, it clearly attests to the safety of use in CAP population. Definitely, large well conducted studies are needed to replicate these findings and clinicians are strongly advised to first exhaust evidence-based agents.⁵

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References

1. Naguy A, Alamiri B. FDA approved psychotherapeutic medications. *Asian J Psychiatr.* 2019, 2020;**49**:101976.
2. Cutler AJ, Mattingly GW, Jain R, *et al.* Current and future nonstimulants in the treatment of pediatric ADHD: monoamine reuptake inhibitors, receptor modulators, and multimodal agents. *CNS Spectr.* 2020. doi: [10.1017/S1092852920001984](https://doi.org/10.1017/S1092852920001984). Online ahead of print. 1–27.

3. Markham A. Solriamfetol: first global approval. *Drugs*. 2019;**79**(7): 785–790.
4. Doernberg E, Hollander E. Neurodevelopmental disorders (ASD and ADHD): DSM-5, ICD-10, and ICD-11. *CNS Spectr*. 2016;**21**(4):295–299.
5. Mattingly GW, Wilson J, Ugarte L, *et al*. Individualization of attention-deficit/hyperactivity disorder treatment: pharmacotherapy considerations by age and co-occurring conditions. *CNS Spectr*. 2020. doi: [10.1017/S1092852919001822](https://doi.org/10.1017/S1092852919001822). Online ahead of print. 1–20.