

Alpha agonists in child and adolescent psychiatry



Judy Longworth Psychological Medicine judy.longworth@health.nsw.gov.au

Alpha agonists have a place in controlling the noradrenergic drive of the autonomic nervous system.

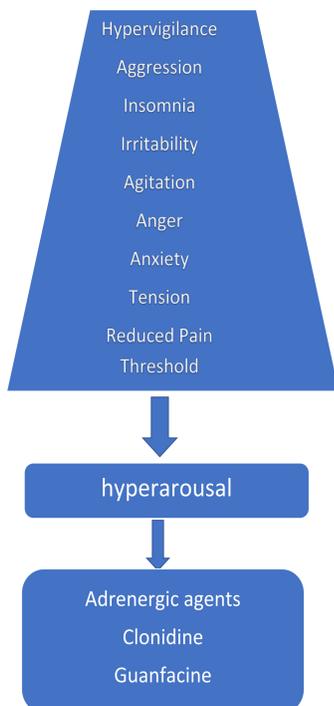
prazosin

Stimulate α_1 receptors to accelerate release of serotonin

Although not widely used in practice compared to adult services there is increasing use for patients not sufficiently controlled with clonidine. Adult and especially veteran literature suggest prazosin useful for post traumatic stress disorder (PTSD).

Patient 14M with significant PTSD leading to marked functional problems where clonidine plus propranolol did not sufficiently decrease his arousal so he could then partake in psychological as well as physiotherapies. After several years of inability to walk and attend school he is now back at school and beginning to walk unaided.

Community psychiatrists tend to use prazosin.



Adapted from Reference: Durr et al BMC Paed 2021(2021) 21:512

clonidine

Stimulate α_2A , α_2B , α_2C and imidazole receptors

Widely used to control arousal and for stress modulation in both functional neurological disorders as well as neurodiverse population. Clonidine

Patient 13M admitted to acute mental health ward coming with a reputation of significant violence to both property and people. Clonidine used at 0.05mg tds and 0.1mg at night, When required dosing of additional 0.05mg was also given to maintain safety for all.

Patient 13M with known uncontrollable behaviours and poor impulse control on background of autistic spectrum disorder. Clonidine started to minimise the potential for weight gain with risperidone also prescribed.

Patient 15F with a complex background of organic pain as well as functional neurological disorder and autistic spectrum disorder (ASD). Clonidine trialled at 25 micrograms four times daily with increase to 50 micrograms to control ongoing distress at management of complex organic problem which was ensuring longer duration of stay as well as discomfort. As clonidine was not holding the discomfort and stress the alpha agonist was changed to guanfacine.

Patient 15F with long term admission into mental health unit with background of autistic spectrum disorder and atypical eating disorder as well as complex psychosocial issues leading to ongoing deliberate self harm (DSH). Clonidine originally used for sleep adjuvant therapy but with the DSH clonidine was increased to give cover over the day.

Patient 16M with complex autoimmune encephalitis as well as narcolepsy, and other organic issues on background of level 3 autism and moderate intellectual disability with multiple behavioural issues requiring sedation and regular intravenous infusions. Clonidine has enabled him to be quietly admitted and have his infusion rather than IM sedation and restraint.

guanfacine

Stimulate α_2A receptors primarily in prefrontal cortex

Once stabilised on clonidine as school is an important part of any child or adolescent's day having a medication that is only given daily is an advantage.

Patient 15F with significant DSH mainly scratching, PTSD from domestic violence (DV) stabilised on clonidine but switched to guanfacine to help minimise the pill burden and facilitate return to school.

Patient 13F with functional neurological disorder (FND) presenting as functional tics and high degree of anxiety. Able to participate in inpatient rehabilitation programme whilst on small dose of guanfacine.

Patient 12F admitted to medical ward with complex psychosocial, neuropsychiatric as well as FND and ASD. In community taking guanfacine for ADHD symptoms but increased on admission and together with some lurasidone, psychotherapy, physiotherapy has now progressed to walking unaided and back to community follow-up.



For further information about management of child and adolescent patients with autistic spectrum disorder, mental health problems as well as intellectual disability

Conclusion

So there are many occasions where an alpha agonist can be of benefit to the patient to ensure both patient and carer safety as well being able to access non pharmacological therapies for their long term benefit.



Scan for further information about functional neurological disorders and stress system

