Guanfacine use in Children and Young People (CYP) with Comorbid Learning Disability (LD) or Autistic Spectrum Conditions (ASC): A narrative synthesis of the literature

Dr Emma Davies ST2, Dr Craig McEwan ST4,
Child and Adolescent Psychiatry
Sussex Partnership Foundation Trust, UK

Introduction

Children and Young People (CYP) who have a Learning Disability (LD) or Autistic Spectrum Condition (ASC) are more likely to have Attention Deficit Hyperactivity Disorder (ADHD) than the general population.

Historically this group have more side effects and less response to traditional treatments for ADHD[1].

Guanfacine – a **selective alpha2-adrenergic receptor agonist**. Licensed as a non-stimulant medication used in the treatment of ADHD, for whom stimulants are not suitable, not tolerated, or have been shown to be ineffective.[2]

There remains a lack of clarity about the impact of guanfacine on the LD/ASC population.

Aims: to identify existing literature to establish the evidence base for prescribing guanfacine in CYP with LD/ASC.

Hypothesis: that this group are more likely to experience side-effects, discontinuation and less objective benefit with guanfacine.

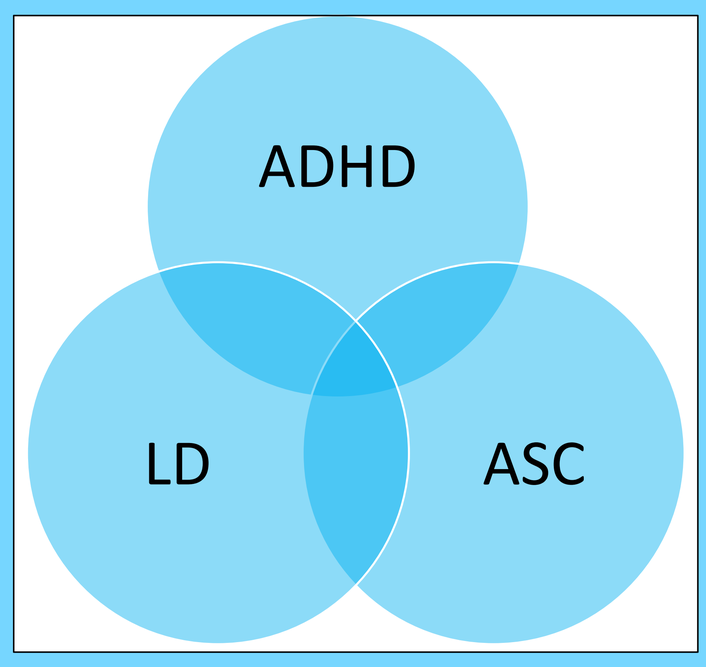
Methods

Systematic search: Psychinfo, EMBASE, Medline and Pubmed.

Search terms: (('autism' OR 'ASD' OR 'ASC' 'learning disability' OR 'intellectual disability') AND guanfacine).

Inclusion criteria: Under 18's (or clearly defined U18 sub-cohort), English speaking paper, ASC diagnosis/Learning Disability Diagnosis by clinical standards, prescribed guanfacine, diagnosis of ADHD.

Two researchers independently screened all titles to identify and appraise papers. Data were collated using narrative approach.

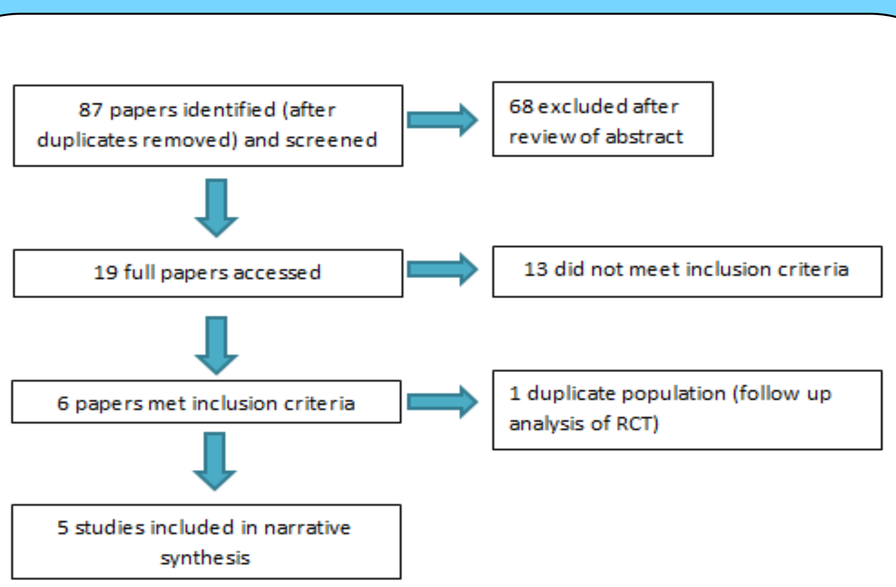


Results

Five studies were identified which met the inclusion criteria: one RCT (n=62), crossover trial (n=11), one prospective open trial (n=25), one retrospective analysis (n=80) and one case report. Total population of **179.**

In comparison to placebo guanfacine showed some improvement in ADHD symptomology. Improvement was shown through a **reduction in hyperactivity symptoms**, measured by Aberrant Behaviour checklist- hyperactivity subscale, in three studies[3, 4, 5]. In a retrospect review of 80 cases, efficacy was documented by clinicians in only 23.8% of cases[6].

The type and frequency of **side effects** varied across the five studies. Drowsiness was common and reported between 31-86% of cases[3, 4, 6]. Other symptoms reported in the data included headaches, sleep disturbance, enuresis, irritability, aggression, constipation and social withdrawal[3, 4, 5, 6]. Dose reductions due to side effects were reported in 30% of cases by Scahill et al[3]. Discontinuation due to side effects were reported between 0%[6, 7]. and 13%[3, 5].



Discussion

The anecdotal reports of high numbers of CYP with LD/ASC being prescribed guanfacine, demonstrate **a clear lack of research regarding the efficacy and tolerability of guanfacine in the LD/ASC CYP population**. No studies compared the LD or ASC population to their peers

The limited population studied does show some improvement in hyperactivity subscales measured but interestingly no significant efficacy on improving inattentive symptoms. NICE[2] recognises this deficit and has continued to advise clinicians to make the same medication choices for this population while considering adjustments in dose titration and monitoring.

The vastly contrasting levels of reported side-effects merits further analysis.

In addition, the rate of titration and frequency of monitoring required in this population has not been studied and therefore provides no guidance to individual clinicians.

Conclusion

- There is a clear **lack of evidence** regarding the efficacy and tolerability of guanfacine in the LD/ASC CYP population.
- Clinicians prescribing to young people with comorbid ADHD and ASC/LD are doing so without clear guidance regarding drug monitoring or cohort-specific side effect profiles.

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