Pharmacotherapy in service users with Tourette syndrome and persistent motor/vocal tic disorders at a specialist tertiary centre

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INTRODUCTION

- Tics are repetitive, uncontrollable movements or vocalizations associated with specific sensory symptoms (1).
- Tourette syndrome is a relatively common neurodevelopmental disorder characterised by chronic motor and vocal tics (1).
- Tics and behavioural co-morbidities can result in different degrees of impairment, pain, emotional distress, social embarrassment and deleterious effect on health-related quality of life (1, 2).
- The successful management of tic disorders can involve behavioural therapies, pharmacological agents, and functional neurosurgery in highly selected cases (3).
- The American Academy of Neurology (AAN) guideline committee performed a systematic review and developed guideline recommendations on the assessment and treatment of tics in both children and adults with Tourette syndrome and other chronic tic disorders.

AIM

This audit evaluated whether the pharmacotherapy management of service users diagnosed with a tic disorder is concordant with the recommendations of the recent AAN guidelines.

METHODS

Population: 192 service users attending the Tourette syndrome clinic (led by a Consultant in Behavioural Neurology, Department of Neuropsychiatry, Birmingham and Solihull Mental Health NHS Foundation Trust)

Relevant data was gathered from the consultant's database and the electronic system (Rio)

The following information was systematically collected: age, sex, diagnosis, concomitant neuropsychiatric conditions, indicators of tic severity, tic-suppressing medication.

Table 1. Demographic and clinical characteristics of the audit sample.

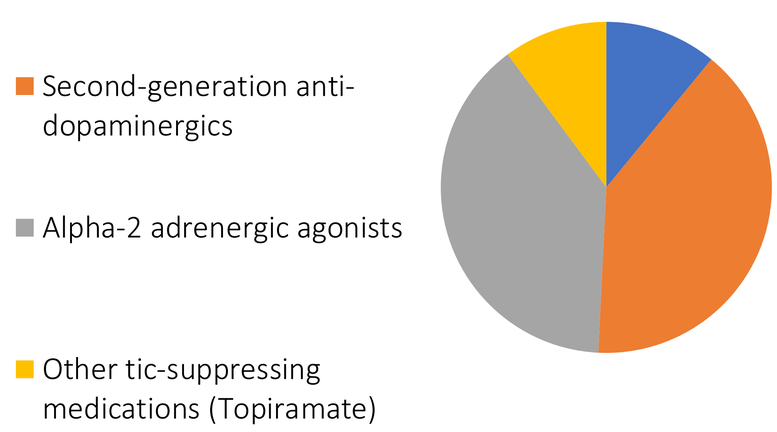
Demographic/clinical characteristic	N (%)
Male gender (n, %)	134 (70)
Age (mean, range)	29 (16-68)
OCD (n, %) OCB (n, %)	49 (26) 130 (68)
ADHD (n, %)	56 (29)
ASD (Asperger syndrome) (n, %)	23 (12)
Depression (n, %)	71 (37)
Anxiety (n, %)	34 (18)
Tic severity (YGTSS total score) (mean, sd)	55 (14.59)

Abbreviations: ADHD, attention-deficit and hyperactivity disorder; ASD, autism spectrum disorder; OCD/B, obsessive-compulsive disorder/behaviours; YGTSS, Yale Global Tic Severity Scale.

Table 2. Pharmacotherapy in the audit sample.

Pharmacotherapy	N (%)
Any medication for tics	111 (58)
Alpha-2 agonist & antidopaminergic agents	12 (6)
Alpha-2 agonist (Clonidine)	50 (26)
Antidopaminergic medication	65 (34)
First-generation antidopaminergic agents - Haloperidol - Pimozide - Other	14 (7) 7 (4) 2 (1) 4 (2)
Second-generation antidopaminergic agents - Aripiprazole - Risperidone - Other	51 (27) 37 (19) 11 (6) 5 (3)
Other tic-suppressing medications (Topiramate)	13 (7)

Figure 1. Use of main groups of recommended pharmacotherapy for tics in the audit sample.



KEY FINDINGS:

- The pharmacotherapy management of tic disorders was concordant with the recommendations of the recent AAN guidelines.
- The vast majority (102/111, 92%) of tic-supressing medication used were recommended in the AAN guidelines.
- Medications with the strongest evidence for clinical benefit were not always used more frequently (e.g., 37/111, 19% on aripiprazole).

CLONIDINE

Although it was the most prescribed medication, the certainty in tic-suppressing effect presented in the guidelines is lower than other therapeutics (e.g., risperidone). However, clonidine has a better tolerability profile and it is recommended for service users with co-morbid ADHD (3). Out of the 56 service users with co-morbid ADHD, 50 (89%) were prescribed clonidine.

NON-RECOMMENDED MEDICATION

Only 9 service users (8%) were prescribed pharmacological agents not included in the AAN guidelines. This is likely due to specialist clinical judgement and the individual neuropsychiatric profile.

IMPROVEMENTS

To improve this service, reasons for using pharmacological agents not included in the AAN guidelines should be reviewed and the use of treatment flowcharts should be implemented to ensure continued adherence to current evidence-based guidelines.

REFERENCES

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