A question of information mismatch: The effect of ADHD stimulant medications on Tourette’s syndrome

Authors: 1 N Hisham, 2 S Shabbir

1. Epsom & St Helier NHS Trust
2. University Hospital Lewisham

AIM:
To assess the information provided by pharmaceutical companies to patients and doctors regarding the impact of stimulant medications indicated for the treatment of Attention Deficit Hyperactive Disorder (ADHD) on Tourette’s syndrome (TS) and tics in children.

INTRODUCTION:
According to the DSM-5, Attention-deficit hyperactivity disorder (ADHD) is a disorder with its onset in early childhood, and is characterized by symptoms of hyperactivity, inattention, and impulsivity that interfere with daily and occupational functioning. Tourette’s Syndrome (TS) is a disorder in which a patient has multiple motor tics and one or more vocal tics. The tics have to be present for more than 1 year since first tic onset and onset has to be before 18 years of age. (1) There is a variety of data on the prevalence of ADHD in patients with Tourette’s, one study estimates the prevalence to range between 35% to 90% (2).

As per NICE guidelines, in the presence of impaired functioning, medication for the treatment of ADHD symptoms should be considered once environmental measures have not demonstrated sufficient improvement. (3) Early intervention for ADHD can potentially reduce psychosocial complications. (4) However, there remains a pervasive belief that the use of stimulants to treat ADHD symptoms in children with comorbid tic disorders is contraindicated, because of concerns about possible tic exacerbation. This is despite most guidelines now stating that whilst a transient tic exacerbation possible, stimulants are safe to use in ADHD patients who also have tics. Accurate information on the treatment of ADHD for those with a underlying tic disorder is essential to ensure medication is given to children with tics who could benefit from it. Pharmaceutical companies are legally required to provide a Summary of Product Characteristic (SPC) and Patient Information Leaflet (PIL) for each medication as it is an integral part of the marketing authorisation approval. The SPC contains vital information for the usage and prescription of a drug for use by healthcare professionals. The PIL included in the medication packaging is a patient-friendly version of the SPC.

METHODOLOGY:
The available stimulant medications licenced for use in paediatric patients with ADHD in the UK were identified through the Medicines & Healthcare products regulatory Agency (MHRA) website. The SPC and PIL were then accessed from the Electronic Medicines Compendium (EMC) website. Those not on the site were obtained directly from the marketing authorisation holder. Any direct mention of tics or Tourette’s in the contraindication, warning and caution, or side effect section were documented. The information was then tabulated and compared. 18 licensed stimulant medication were included as part of this scoping review.

DISCUSSION:
As it stands, out of the 18 medications reviewed; 100% of them still list tics and/or Tourette’s as a potential side effect with 11% listing tics as a contraindication and 16% listing Tourette’s as a contraindication. Whilst most current guidance has inadequately reflected latest evidence surrounding the safety of stimulants use amongst TS patients, the BNF, still includes this as part of its caution.

Clinical Significance: There remains widespread inconsistencies, not just in the PIL and SPC, a resource created by pharmaceutical company themselves, but also in national guidance by trusted regulating bodies. This could lead to confusion amongst clinicians, deterring them from prescribing stimulants to TS patients who could greatly benefit from it. Similarly a patient or parent may choose to refuse treatment or not seek treatment due to concerns raised in PIL on the use of ADHD medication and tic disorders. The PIL is included in the packaging of prescribed medication, meaning that information it provides could be the first introduction to the medication patients receive in regards to their medication, and any misinformation thereafter.

CONCLUSION
Accurate information on the treatment of ADHD for those with an underlying tic disorder is essential to ensure medication is given to children with tics who could benefit from it. The discrepancies identified in this study could lead to undertreatment of ADHD, confusion for the treating practitioner, as well as distrust and anxiety in the patient groups.

RESULTS:
Based on the data available, 18 stimulant medication were looked at. There were mention of tics and Tourette’s syndrome in all, either in the caution or contraindication section.

REFERENCES: