Exploratory analysis of early treatment discontinuation and clinical outcomes of patients with attention-deficit/hyperactivity disorder

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Abstract
Introduction
This post-hoc analysis was to investigate the impact of treatment discontinuation on clinical outcomes in patients with attention-deficit/hyperactivity disorder (ADHD).

Methods
Data are from a 12-month, observational, multinational study that included outpatients aged 6–17 years who were diagnosed with ADHD and treated with atomoxetine, methylphenidate, or nootropic agents. Treatment effectiveness and proportions of patients who discontinued treatment were compared between China and the other non-Western countries/regions combined. Propensity score matching was used to further estimate the association between treatment discontinuation and effectiveness.

Results
Of the 546 patients who entered the study, 337 patients had complete data and were included in the analyses. Compared with the other countries/regions, China subgroup had a higher treatment discontinuation rate (odds ratio = 25.80; P < 0.0001) and poorer treatment effectiveness: least-squares (LS) mean changes were 5.74 versus 8.56 (P = 0.0225) for the Child Health and Illness Profile-Child Edition (CHIP-CE) Achievement domain and −1.87 versus −2.13 (P = 0.0401) for Clinical Global Impressions-ADHD-Severity (CGI-ADHD-S). Further analyses of matched discontinuer–maintainer pairs showed that discontinuers demonstrated poorer effectiveness: LS mean changes for the CHIP-CE Achievement domain and CGI-ADHD-S (discontinuer versus maintainer) were 5.36 versus 9.10 (P = 0.0255) and −1.32 versus −1.96 (P = 0.0179) for overall population, respectively, and 4.40 versus 10.17 (P = 0.0065) and −1.48 versus −2.45 (P = 0.0089), respectively, for China subgroup.

Discussion
This analysis found that early treatment discontinuation was associated with worse clinical outcomes for patients with ADHD. China subgroup had substantially higher discontinuation rates and poorer effectiveness outcomes. Strategies to improve medication persistence have the potential to improve outcomes for ADHD patients in China.