Treating core Rett syndrome symptoms

7 June 2019, by Kelsey Herbers

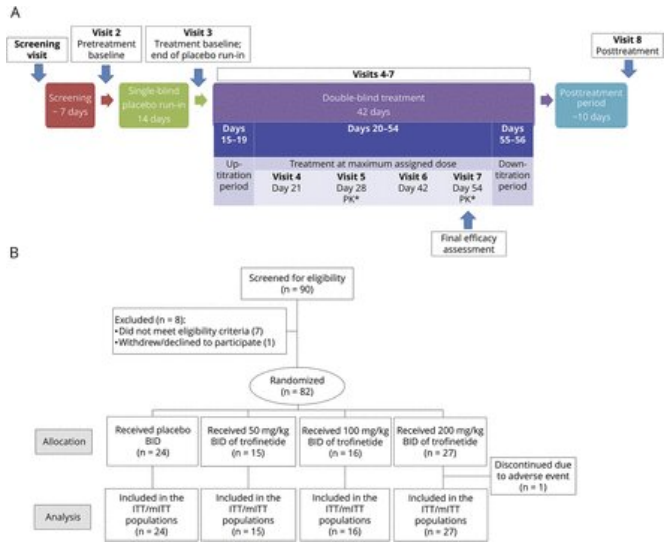

Figure 1 Study design (A) and participant disposition (B) BID = twice daily dosing; ITT = intention to treat; mITT = modified intention to treat; PK = pharmacokinetic.

A new study published in *Neurology* reports the drug trofinetide has proven safe and effective in treating core symptoms of Rett syndrome in female children and adolescents.

A neurodevelopmental disorder, Rett syndrome is characterized by normal early growth followed by a loss of use of the hands, loss of spoken language, problems with walking and repetitive hand movements. There are currently no treatments available to relieve prevalent symptoms.

In the double-blind, placebo-controlled study, Jeffrey Neul, MD, Ph.D., and colleagues studied the tolerability, pharmacokinetics and clinical response of trofinetide in children ages 5 to 15 who received varying doses. All doses were well-tolerated, with children who received the highest dose showing significant improvements in behavior and other clinical features relative to those randomized to the placebo.

The study indicates trofinetide's potential for treating patients with Rett syndrome, supporting additional trials of this medication in patients with the disorder.

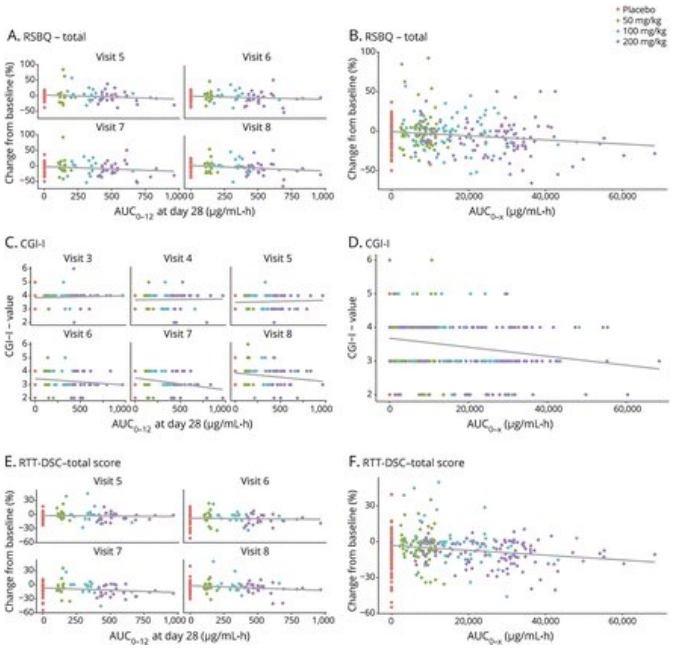

Figure 3 Relationship between change from treatment baseline in RBSQ, CGI-I, and RTT-DSC and trofinetide exposure Relationship between change from treatment baseline in RBSQ, CGI-I, and RTT-DSC and AUC0–12 at different visits and over the active treatment period. (A) Relationship between percentage change from treatment baseline in RSBQ-total score and AUC0–12 at day 28. (B) Relationship between percentage change from treatment baseline in RSBQ-total score and cumulative AUC during the active dosing period. (C) Relationship between CGI-I scores and AUC0–12 at day 28. (D) Relationship between CGI-I score and cumulative AUC during the active dosing period. (E) Relationship between percentage change from treatment baseline in RTT-DSC score and AUC0–12 at day 28. (F) Relationship between percentage change from treatment baseline in RTT-DSC score and cumulative AUC during the active dosing period. Visit 3 (day 14, end of placebo run-in), visit 4 (day 21), visit 5 (day 28), visit 6 (day 42), visit 7 (day 54, end of treatment), visit 8 (day 66, posttreatment). Solid lines are obtained by linear regression. Where applicable, placebo data (AUC = 0) from different visits are pooled

together. AUC = area under the concentration vs time curve; CGI-I = Clinical Global Impression Scale–Improvement; RSBQ = Rett Syndrome Behaviour Questionnaire; RTT-DSC = Rett syndrome–Clinician Domain Specific Concerns.

More information: Daniel G. Glaze et al. Double-blind, randomized, placebo-controlled study of trofinetide in pediatric Rett syndrome, *Neurology* (2019). DOI: 10.1212/WNL.0000000000007316. n.neurology.org/content/92/16/e1912

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