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311.DISORDERS OF PLATELET NUMBER OR FUNCTION: CLINICAL AND EPIDEMIOLOGICAL

Athn Transcends Natural History Cohort Study of Bleeding Symptoms and Treatment Outcomes in Patients with Glanzmann Thrombasthenia

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Background

Glanzmann thrombasthenia (GT) is a rare, inherited, qualitative platelet disorder caused by a deficiency of one or both platelet surface proteins alpha IIb beta 3. This protein on the platelet functions as the fibrinogen receptor and is essential for hemostasis. Individuals with GT have lifelong bleeding episodes that can be frequent and severe often involving the muco-cutaneous membranes. GT is an autosomal recessive disorder with variations of the *ITGA2B* or *ITGB3* genes. The prevalence of GT is estimated to be 1:1,000,000 in the general population. In populations with high consanguinity, the prevalence is higher.

Reports of the impact of living with GT are lacking. Platelets have previously been the mainstay of treatment for severe bleeding and to manage surgical bleeding in people with GT. However, platelet transfusions carry a number of risks including allergic reactions (anaphylaxis, acute lung injury), pathogen transmission, and the formation of allo-antibodies. Primary bleeding prophylaxis is currently not available and all treatment for bleeding is reactive and on-demand.

As potential new therapies emerge, clinicians require unbiased, long-term data on the safety and effectiveness of both current and new therapies. Therefore, we designed a registry of people with GT with the aims of assessing the bleeding rate and phenotype for people with this condition, as well as describing their lived experience.

Rationale

Due to the rare nature of GT, data within individual center registries are naturally limited. There is variation in the data held and method of collection. The aim of the study is to collect biospecimens, phenotypic characteristics, bleeding patterns, and treatment utilization, from people who have been diagnosed with GT. To achieve this, a comprehensive, multi-institutional, observational cohort study will be conducted to: Allow collection of longitudinal safety and clinical practice data for treatments in patients with GT, allowing monitoring of recently approved and well-established therapies; Aid new discovery, through the collection of biospecimens and phenotype data; Provide sufficient, unified data capture in participants with this rare disorder across the United States.

Objectives

To describe the bleeding phenotype in GT, including the frequency of bleeds, the Site of bleeds, and to describe real-world effectiveness of therapies used in GT, by evaluating; the frequency of bleeds, Patient reported outcomes, Healthcare and treatment utilization, To create a database for future research.

Methods

ATHN Transcends (NCT04398628) assesses the safety and effectiveness of contemporary therapies for people with inherited bleeding and clotting disorders. The primary aim of ATHN Transcends is to collect specific adverse events harmonized with the European Haemophilia Safety Surveillance (EUHASS). The study is constructed to allow the addition of specific modules. We have designed the GT module in ATHN Transcends to assess the safety and effectiveness of current therapy for GT. In addition, we will be collecting data around the actual bleeding rate in those who live with GT as well as more fully describing the lived experience of being impacted by GT. The study will be conducted through ATHN-affiliated centers who care for those impacted by GT.

Study Design

This study is a longitudinal, natural history, observational cohort study of approximately 50 participants with GT at 16 ATHN-affiliated treatment centers across the United States and a sub-cohort from one international ATHN Affiliate. The minimum planned duration of study participation for participants is approximately 18 months. Up to 10 pediatric subjects aged 2 years to <10 years, up to 10 aged 10 to <18 years, and a minimum of 30 adults >18 years with GT are expected to be enrolled. Each subject will complete a daily record for three months of bleeding event details, and any treatments.

Summary

ATHN Transcends has received central IRB approval and is currently being rolled out across participating American Thrombosis and Hemostasis Network (ATHN) Affiliates in the United States. Enrollment in the GT Module can begin as soon as a site opens ATHN Transcends to enrollment.

Conclusion

ATHN Transcends provides a real-world mechanism in which to collect safety and effectiveness data of contemporary therapies for people with GT. The GT Module of ATHN Transcends will allow collection of Good Clinical Practice-grade data.

Disclosures Chrisentery-Singleton: *Sanofi, GBT, Octapharma, Genentech, Biomarin, HEMA Biologics, Novo Nordisk, Takeda, BPL, Biomarin, CSL Behring, Pfizer:* Consultancy, Honoraria, Speakers Bureau; *Bayer, Grifols, Kedrion:* Consultancy, Honoraria; *Pfizer:* Research Funding. **Recht:** *Partners in Bleeding Disorders:* Membership on an entity's Board of Directors or advisory committees; *CSL Behring, Genentech, Hema Biologics, Pfizer, Sanofi, Takeda, uniQure:* Consultancy; *Bayer, BioMarin, CSL Behring, Genentech, Grifols, Hema Biologics, LFB, Novo Nordisk, Octapharma, Pfizer, Sanofi, Spark, Takeda, uniQure:* Research Funding.

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