

Q&A: Comorbidity between neurodevelopmental disorders and childhood-onset type 1 diabetes

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Childhood-onset type 1 diabetes (onset

In her thesis, Ph.D. student Shengxin Liu at the Department of Medical Epidemiology and Biostatistics studied the potential mechanisms behind the comorbidity between childhood-onset type 1 diabetes and neurodevelopmental disorders and explored its impact on health and education outcomes. Her goal was to improve early detection, prevention, and management strategies to enhance the quality of life for the affected children and adolescents.

What are the most important results in your thesis?

We found that childhood-onset type 1 diabetes is associated with increased risk of neurodevelopmental disorders, with the highest risk observed in those with less adequate glycemic control. In addition, we found that having neurodevelopmental disorders is associated with poor glycemic control and increased risk of diabetic nephropathy and retinopathy in people with childhood-onset type 1 diabetes. Moreover, we noted that comorbid childhood-onset type 1 diabetes and ADHD seemed to be associated with lower odds of achieving educational milestones from compulsory school to university.

Why did you become interested in this topic?

From the early days of my medical training, I was drawn to the intricate relationship between physical and psychological health. This foundational interest was soon channeled into a special focus on diabetes research, driven by its multifaceted nature and its widespread impact on individuals and communities. But beyond the physiological manifestations of conditions like type 1 diabetes, it is the daily struggles of affected individuals that truly resonate with me.

The thought of a young individual, not only grappling with the stringent demands of diabetes management—including rigorous insulin regimens

and perpetual monitoring—but also contending with the added cognitive and behavioral challenges associated with neurodevelopmental disorders, really touches me. Yet, what amplifies the urgency of this situation is our current lack of comprehensive understanding. While we acknowledge these dual challenges, our grasp on their intersection and implications is still in its formative stages.

This gap in knowledge not only hinders optimal care but also diminishes societal awareness of the unique challenges these young individuals face. It is within this context that I find my calling to delve into the comorbidity between type 1 [diabetes](#) and neurodevelopmental disorders for my Ph.D. research.

What do you think should be done in future research?

I believe that with more research disentangling the complexity of this comorbidity, we can pave the way for better therapeutic interventions, foster a more compassionate societal perspective, and most importantly, amplify the voices of these young individuals, advocating for their holistic well-being. It isn't just a matter of medical advancement; it's about understanding, empathy, and actionable change.

More information: Comorbidity between neurodevelopmental disorders and childhood-onset type 1 diabetes.

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