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Parkinson’s Disease in Women: Research Gaps, Treatment Challenges, and New Hope Through GEM-PD

May is Women’s Health Month and in observation, Bio.News sat down with Ragasudha Botta, MBBS, PhD, MMSc, Senior Scientific Director, Critical Path for Parkinson’s (CPP) and Critical Path Institute (C-Path) to discuss how women’s lived experiences with Parkinson’s disease have too often been overlooked in clinical research and treatment development—and have even resulted in later diagnosis. From biological differences and disparities in care access to the promise of precision medicine initiatives like GEM-PD, we explore how researchers and advocates are working to ensure women with Parkinson’s are not just data points, but are active voices when it comes to drug development and patient care.

What is Parkinson’s disease, and what does the current treatment landscape look like?

Parkinson’s disease (PD) is a progressive neurodegenerative disorder that affects movement, but it also involves many non-motor symptoms that can shape a person’s daily life. Biologically, PD is characterized by loss of dopaminergic neurons and accumulation of misfolded alpha-synuclein pathology. Clinically, diagnosis still relies largely on motor features, particularly bradykinesia together with rigidity and/or resting tremor.

The current treatment landscape has improved considerably, but it remains largely focused on symptom control rather than stopping the disease itself. Levodopa remains the most effective treatment for bradykinesia and other core motor symptoms, and dopaminergic therapies remain central to PD treatment. Other commonly used symptomatic treatments can improve symptoms and quality of life, but long-term treatment is often complicated by wearing-off, dyskinesias, or other adverse effects depending on the medication used. PD research is moving toward therapies that target disease biology, including alpha-synuclein aggregation, mitochondrial dysfunction, LRRK2 and GBA1-related pathways, gene therapy, and cell replacement strategies.

Despite this progress, no currently available treatment has been shown to definitively halt PD progression or prevent neurodegeneration. So, the current landscape is both encouraging and incomplete. We have increasingly effective ways to manage symptoms, but the field still urgently needs therapies that change the long-term course of the disease.

Read the full piece in its original format in Bio.News, here.