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INVITED COMMENTARY

Male Health

Gene mapping of serotoninergic system polymorphisms provides insight on pathology and treatment of men with lifelong premature ejaculation

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In spite of its long history and high prevalence, the exact pathophysiology of premature ejaculation (PE) remains to be unknown.[1] Over a decade ago, Waldinger *et al*.[2] initially suggested that hypersensitivity of 5-HT_{1A} receptors and/or hypofunction of 5-HT_{2C} receptors might be responsible for this phenomenon; thus, the daily use of a selective serotonin reuptake inhibitor has now emerged as an effective treatment for delaying ejaculation.

The study of Janssen *et al*.[3] provided further evidence regarding the differences in serotonin receptors in patients with lifelong PE (LPE). Using a similar method, associations of the intravaginal ejaculatory latency time with other various polymorphisms of the serotonergic system have also been found.[4,5] The study of Janssen *et al*.[3] adds to the hypothesis that apart from these previously discussed polymorphisms, the Cys23Ser 5-HT_{2C} receptor gene polymorphism is associated with the intravaginal ejaculatory latency time in men with LPE.[6] This opens a floodgate opportunity with regards to further gene mapping of the serotonergic system, with a potential to clinically correlate results.

This exciting study sheds light on the pathophysiology of LPE and we hope that it will serve as a springboard to inspire others to investigate other possible genetic polymorphisms that could be contributing to LPE. As multiple serotonin system genetic polymorphisms have been associated with the increased intravaginal ejaculatory latency time of LPE,[3-5] it is likely that numerous other polymorphisms of the 5-HT_{2C}-receptor gene will have to be investigated, if we wish to gain complete understanding in the role of the serotonergic system in LPE. Of note, the current study involved a population limited to 94% Caucasian Dutch men. As genetic diversity is common between populations, it may be beneficial to confirm results in various populations, as the authors stated. Additionally, it would be beneficial to conduct similar studies in larger cohorts, as the number of subjects currently studied is low for an epidemiologic genetic study. Nevertheless, the simplicity and elegance of the study should be inspiring to all as we work towards gaining a better understanding of the mechanisms behind LPE, which will ultimately lead to targeted treatments and improved quality of life for our patients.

COMPETING INTERESTS

All authors declare no competing interests.

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