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SEXUAL DYSFUNCTION

SEROTONIN SNPS IN PVD

New data from Heddini *et al.* have indicated that the serotonergic system is involved in the pathophysiology of provoked vestibulodynia (PVD).

Single nucleotide polymorphisms (SNPs) in the serotonin (5-hydroxytryptamine) receptor gene, *HTR2A*, have been shown to be associated with chronic pain conditions such as fibromyalgia as well as with depression. Current evidence points towards PVD being similar to other chronic pain syndromes, with patients reporting pressure on the vestibular tissue causing pain. The the aetiology of PVD is currently unclear, but psychosexual and biochemical factors are thought to be involved as depression and anxiety are also more common in patients PVD.

PVD shares many features with other pain conditions that are associated with polymorphisms in the *HTR2A* gene. Two common SNPs—rs6311 and rs6313—have been found; rs6313 in particular is associated with fibromyalgia. However, the relationship between these two known risk SNPs and PVD has not previously been investigated.

Heddini and colleagues recruited 98 women with PVD and 103 controls to the study. Genetic analyses were conducted on blood samples, which were obtained during days 3–13 of each participant's menstrual cycle. Analysis of the SNPs rs6311 and rs6313 revealed an increased likelihood of participants presenting with PVD if they were either homozygous or heterozygous for the 1438G and 102C *HTR2A* alleles (OR = 2.9, $P = 0.017$). Patients with these genotypes reported more concomitant bodily pain than those without ($P = 0.049$) and the 102C allele was found to be common in patients with PVD. However, no other differences in pain measurements linked with genotype were found across the whole study population or in separate analyses of the control group or patients with PVD.

The results presented in this study have similarities with those reported for other chronic pain syndromes and provide further evidence that PVD is part of a general pain disorder. Treatment for PVD has varying outcomes and this information should assist caregivers in treatment choice and help in the development of more-efficient therapies.

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Original article Heddini, U. *et al.* Serotonin receptor gene (*5HT-2A*) polymorphism is associated with provoked vestibulodynia and comorbid symptoms of pain. *J. Sex. Med.* doi:10.1111/jsm.12685