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[\[PDF \(172K\)\]](#) [\[References\]](#)**Efficacy of tricyclic antidepressant is associated with beta2-adrenoceptor genotype in patients with interstitial cystitis**Saori NISHIJIMA¹⁾, Kimio SUGAYA¹⁾, Tetsuo YAMADA²⁾, Minoru MIYAZATO¹⁾
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ABSTRACT

We examined the relationship between the Arg16Gly polymorphism of β 2-adrenoceptor (ADRB2) and the efficacy of tricyclic antidepressant therapy in patients with interstitial cystitis (IC). We studied 55 IC patients and 113 controls. The IC patients were treated with imipramine hydrochloride, and the efficacy of treatment was categorized by patients' satisfaction (no change, fair, or good). Genomic DNA was extracted from the controls and IC patients, and the Arg16Gly polymorphism of ADRB2 was analyzed. The Arg16Gly polymorphism showed a significant difference in prevalence between IC patients and controls, and Arg/Arg was associated with increase in the risk of IC than Arg/Gly or Gly/Gly. Regarding the tricyclic antidepressant therapy, there was a significant difference in the prevalence of this polymorphism between IC patients with no change or a fair response to treatment and controls, and Arg/Arg was associated with decrease in the response rate to tricyclic antidepressant therapy than Arg/Gly or Gly/Gly. Therefore, these results suggest that the Arg16Gly polymorphism of ADRB2 is related to down-regulation of ADRB2 expression in the detrusor muscle, so that the response of IC to tricyclic antidepressant therapy depends on the Arg16Gly polymorphism.

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