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Lack of association between LIPC-514 C/T polymorphism of hepatic lipase and endometriosis in Iranian women

Mehdi Sahmani¹, Talaat Dabbaghi Ghaleh², Maryam Darabi³, Masoud Darabi⁴, Zahra Rashvand¹ and Reza Najafipour¹

¹Department of Clinical Biochemistry, Cellular and Molecular Research Center, Qazvin University of Medical Sciences, ²Kosar Hospital, Qazvin, ³Drug Applied Research Center, Tabriz University of Medical Sciences, and ⁴Department of Biochemistry and Clinical Laboratories, School of Medicine, Tabriz University of Medical Sciences, Tabriz, Iran

Abstract

Aim: Patients with endometriosis may suffer from dyslipidemia. Hepatic lipase (HL) is involved in the metabolism of lipoproteins and has an important role in reverse cholesterol transport. The aim of this study was to investigate the association between the LIPC-514 C/T polymorphism in the HL gene and the risk of endometriosis in a group of Iranian women.

Methods: Ninety-seven patients with endometriosis and 107 women who were negative for endometriosis after diagnostic laparoscopy, as control group, were enrolled in this cross-sectional study. Samples were analyzed for polymorphism of the HL gene using polymerase chain reaction restriction fragment length polymorphism.

Results: Multivariate analysis was used to examine the association between the risk of endometriosis and LIPC-514 C/T polymorphism. There was no statistically significant difference in the frequency of the LIPC-514 C/T polymorphism between patients and the controls (60.7% CC, 34.6% CT, 4.7% TT versus 68.4%, 27.4%, 4.2%, respectively, $P = 0.52$).

Conclusion: The present study suggested that the LIPC-514 C/T polymorphism of the HL gene has no significant association with the risk of endometriosis in the studied Iranian women.

Key words: dyslipidemia, endometriosis, hepatic lipase, LIPC-514 C/T polymorphism.

Introduction

Endometriosis is a common chronic gynecologic disease that is defined as an abnormal placement of endometrial gland and stroma outside the uterus.¹ Abnormal growth of the endometrium is found mainly on the pelvic and visceral peritoneal surfaces, but also may be found on the ovaries, rectovaginal, bladder and bowel.² Endometriosis is associated with a spectrum of symptoms of which chronic pelvic pain is the most common. Dyspareunia, pain during menstruation and

infertility are other symptoms of the disease. Laparoscopy and biopsy are the primary methods for histological diagnosis.^{3,4} Endometriosis is considered a multifactorial disease and most probably a chronic inflammation in the peritoneal cavity triggers the disease.⁵ Previous studies have shown that oxidative stress and inflammatory factors are involved in the pathogenesis and development of endometriosis.^{6,7} A similar process exists in cardiovascular disease. Therefore, an abnormal lipid profile including increased low-density lipoprotein cholesterol (LDL-C) and

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Reprint request to: Dr Reza Najafipour, Department of Clinical Biochemistry and Genetics, Cellular and Molecular Research Center, Qazvin University of Medical Sciences, ShahidBahonar Boulevard, PO Box 34185-754, Qazvin, Iran. Email: r_najafipour@yahoo.com

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