



Effect of Pravastatin on Abrogated Cardioprotective Effect of Late Phase of Preconditioning in Hyperlipidaemic Rats

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SUMMARY. The infarct size-limiting effect of ischemic preconditioning (IPC) is abrogated by hyperlipidaemia. Previously, it has been shown that statins restore the early effect of IPC which may be due to the increased level of adenosine whereas the late effect of IPC with statin treatment in hyperlipidaemic subjects is not known. Therefore, the present study was designed to investigate the effect of pravastatin on myocardial infarct size limiting response of the late phase of preconditioning in hyperlipidaemic rats. In present study, the cardioprotective effect of late phase of IPC was abolished by hyperlipidaemia which is restored by the pravastatin treatment. However, this observed cardioprotection was significantly attenuated by the CPDX, adenosine A1 antagonist noted in terms of increase in myocardial injury. Thus, it is suggested that pravastatin restores the cardioprotective effect of late phase of IPC in hyperlipidaemic heart which may be due to the increased endogenous production of adenosine.

RESUMEN. El efecto limitador del tamaño del infarto del acondicionamiento isquémico (IPC) es abrogado por la hiperlipidemia. Anteriormente, se ha demostrado que las estatinas restauran el efecto temprano del IPC, que puede deberse al aumento del nivel de adenosina, mientras que el efecto tardío del IPC con el tratamiento con estatinas en sujetos con hiperlipemia no se conoce. Por lo tanto, el presente estudio se diseñó para investigar el efecto de la pravastatina en la respuesta limitadora del tamaño del infarto de miocardio de la fase tardía de acondicionamiento en ratas hiperlipidémicas. En el presente estudio, el efecto cardioprotector de la fase tardía del IPC fue abolido por la hiperlipidemia que se restablece con el tratamiento con pravastatina. Sin embargo, esta cardioprotección observada se atenuó significativamente por el CPDX, un antagonista de adenosina A1 observado en términos de aumento en la lesión del miocardio. Por lo tanto, se sugiere que la pravastatina restaura el efecto cardioprotector de la fase tardía de la IPC en el corazón hiperlipidémico, lo que puede deberse al aumento de la producción endógena de adenosina.

KEY WORDS: hyperlipidaemia; late phase of preconditioning; pravastatin; adenosine.

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