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Effects of macrophages depletion on exhaustive exercise-induced acute kidney injury

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Exhaustive exercise induces acute kidney injury. However, the underlying mechanisms on exhaustive exercise-induced acute kidney injury are unclear. Recent studies have indicated that macrophages might contribute to kidney injury. This study aimed to clarify whether macrophages modulate exhaustive exercise-induced acute kidney injury using clodronate liposome. Male C57BL/6J mice were divided into four groups: Sedentary (n=8), Sedentary with clodronate liposome treated (n=8), Exhaustive exercise (n=8), Exhaustive exercise with clodronate liposome (n=7) groups. Exhaustive exercise groups were imposed a treadmill running at gradient 7% for 15 minutes and the speed of 10 m/min, and then 15 m/min, followed by 20 m/min, and finally kept at 25 m/min until exhaustion. Depletion of macrophages was accomplished by administration of clodronate liposome.