ERRATUM

Erratum to: The Rho kinase inhibitor, fasudil, ameliorates diabetes-induced cardiac dysfunction by improving calcium clearance and actin remodeling

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The original version of this article contains two mistakes on the title page; the key messages were erroneously duplicated and appended to the abstract. One keyword was misspelled. The corrected abstract and keywords are given below.

Abstract: Previous study showed inhibition of RhoA and Rho kinase (ROCK) activity with fasudil could alleviate diabetes-induced cardiac dysfunction partially due to improvement of myocardial fibrosis. However, the effect of fasudil on intracellular calcium cycling and actin remodeling, both of which are important to regulate excitation-contraction coupling, is still not fully elucidated. In this study, a diabetic cardiomyopathy model was induced by a single intraperitoneal injection of streptozotocin (STZ) in male Sprague Dawley rats. Diabetic rats were treated with fasudil or placebo for 8 weeks. We

found that long-term administration of fasudil, a specific Rho kinase inhibitor, significantly ameliorated diabetes-induced contractile dysfunction both at cellular and whole organ levels. Fasudil-treated rats displayed improved diastolic intracellular calcium ($[Ca^{2+}]_i$) removal and rescued expression of protein responsible for $[Ca^{2+}]_i$ clearance. Furthermore, our study indicated that fasudil treatment normalized the phosphorylation of the PKC β_2 /Akt pathway in the diabetic heart, which might be the underlying mechanism accounting for the protective effect of fasudil on $[Ca^{2+}]_i$ clearance. In addition, compared to the diabetes group, fasudil also normalized the G/F-actin ratio by preventing cofilin phosphorylation and promoted F-actin organization, suggesting a beneficial effect on actin remodeling. These findings indicate the protective effect of fasudil against diabetes-induced cardiac dysfunction via modulation of Ca^{2+} handling and actin remodeling.

Key words:
Rho kinase
Diabetic cardiomyopathy
Fasudil
Calcium transient
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