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Study on Esmolol Treating Septic Cardiomyopathy by Regulating NLRP3 Inflammasome

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ABSTRACT To expound the mechanism of esmolol in the treatment of septic cardiomyopathy, flow cytometry was used to observe changes in the levels of Treg cells. Ultrasound detection was performed to extract cardiac function in each group of sepsis rats. ELISA was applied to detect myocardial injury markers and inflammatory factors. Pathological detection of myocardial damage was performed, and the heart tissue protein was extracted. Western Blot was employed to detect the expression levels of NLRP3, ASC, casepase-1 and other antibodies in myocardial tissue. Esmolol can significantly improve the cardiac function of rats with septic cardiomyopathy. The experimental results suggested that its therapeutic effect is through regulating the balances between the level of Treg cells and the level of anti-inflammatory factors, as well as the expression level of NLRP3 inflammasome-related protein and its pro-inflammatory factors.