Abstract: P502

Curcumin attenuates H9c2 cell ischemia/reperfusion injury via activating SIRT3 and inhibiting oxidative stress

Authors:
D Liu1, 1Fuwai Hospital, Chinese Academy of Medical Sciences and Peking Union Medical College, Cardiology - Beijing - China People's Republic of,

Topic(s):
Ischemia, Infarction, Cardioprotection

Citation:
Cardiovascular Research (2018) 114 (Supplement 1), S122

Object To investigate the effects of Curcumin in H9c2 cell ischemia/reperfusion (I/R) injury (I/RI), and the roles of Sirtuin 3 (SIRT3) and oxidative stress in this process.

Methods H9c2 cells were treated with Curcumin and I/RI. Cell vitality, Lactate dehydrogenase (LDH) release, Reactive oxygen species (ROS) production, Malondialdehyde (MDA) content, reduced glutathione (GSH) level, Caspase 3, Caspase 9 activity, SIRT3, Bcl2, Bax expressions were detected. Further, SIRT3 siRNA was used to knock down SIRT3 expression, and the indicators above were detected.

Results I/RI significantly reduced cell vitality, increased cell oxidative stress, increased cell apoptosis and reduced SIRT3 expression. Curcumin pretreatment significantly reversed this trend. Further, SIRT3 siRNA treatment abolished the protective effect of Curcumin.

Conclusion Curcumin attenuates H9c2 cell I/RI might through activating SIRT3 and inhibiting oxidative stress.