GW23-e2110

## EFFECTS OF LIPOTEICHOIC ACID-INDUCED DELAYED PRECONDITIONING ON MIDDLE CEREBRAL ARTERY OCCLUSION AND REPERFUSION INJURY IN EATS

doi:10.1136/heartjnl-2012-302920a.207

Jin Ma, Shiyu Ma. *Guangdong Provincial Hospital of Traditional Chinese Medicine*

**Objectives** To explore the effects of lipoteichoic acid (LTA) induced delayed preconditioning (PC) on cerebral ischaemia/reperfusion (I/R) in rats.

**Methods** To mimic focal cerebral I/R, the right middle cerebral artery was intraluminal occluded for 2 h and followed by reperfusion for 24 h or 12 h. The rats of LTA group were pretreated with LTA (1 mg/kg, ip) 24 h before cerebral ischaemia. The contents of malondialdehyde (MDA) and superoxide dismutase (SOD) and containing water of cerebral tissues were evaluated after reperfusion for 24 h. Neurologic function and neurologic deficit score were observed and the concentration of nitric oxide (NO) oxidation were detected after reperfusion for 12 h. Meanwhile, neural apoptosis in right cerebral cortex was detected by TUNEL staining.

**Results** Compared with I/R group, LTA pretreated markedly reduced the content of MDA (1.27 μmol/g. protein vs 1.83 μmol/g. protein) and increased the activity of SOD (3.68 kU/g. protein vs 2.72 kU/g. protein) in cerebral tissues and reduced cerebral oedema. Also, LTA pretreatment could obviously decrease the neurologic deficit score. Meanwhile, LTA pretreatment could obviously reduce the increase of NO concentration in cerebral tissues (0.594 micromol/g. protein vs 0.852 μmol/g. protein) and the percentage of neuronal apoptosis (7.2% vs 34.4%).

**Conclusions** LTA induced delayed PC could obviously decreased cerebral I/R injury and reduced necrosis and apoptosis of cerebral tissues, the mechanisms are associated with reduced the production of free radical and the toxicity of NO after cerebral I/R.