

GW23-e2472

**THE PROTECTIVE EFFECT OF ZINC SULPHATE ON  
OXIDATIVE DAMAGE OF LIVER IN APOE-KNOCKOUT  
MICE FED WITH HIGH FAT DIET**

doi:10.1136/heartjnl-2012-302920b.18

Jiang Jin-jin, Wang Hui-feng, Jiang Jin-jin. *The General Hospital of Taigang*

**Objectives** The aim of the present work was to study the antioxidative effect of zinc sulphate on liver of ApoE-knockout mice fed with high fat diet.

**Methods** Thirty male ApoE-deficient mice at 8 weeks of age were randomly divided into three groups, including atherosclerotic model group (n=10), low-dose group (n=10), high-dose group (n=10), and with 10 male wild-type C57BL/6J mice as a control group. All the mice were fed with high fat diet for 14 weeks. The

## ABSTRACTS

control group and atherosclerotic model group mice drank deionised water, and both low-dose group and high-dose group mice drank 2.5mmol/l and 25mmol/l zinc sulphate respectively. The body weight, the liver/weight index, liver function, antioxidant capacity and metallothionein-1 mRNA level of liver were determined.

**Results** The body weight and weight gain of low-dose group and high-dose group mice were significantly lower than the other two groups ( $p<0.05$ ), the liver/weight index of control group remarkably lower than the other three groups ( $p<0.05$ ). The serum alanine aminotransferase (ALT) and aspartate aminotransferase (AST) of low-dose group and high-dose group mice significantly lower than the other two groups ( $p<0.05$ ). The total antioxidant capacity and superoxide dismutase of low-dose group and high-dose group mice significantly higher than the other two groups ( $p<0.05$ ), but the malondialdehyde (MDA) of low-dose group and high-dose group mice significantly lower than the other two groups ( $p<0.05$ ). The metallothionein-1 mRNA level of liver in high-dose group mice significantly higher than atherosclerotic model group mice ( $p<0.05$ ).

**Conclusions** This study demonstrates that zinc sulphate could markedly decrease the body weight and weight gain in ApoE-knockout mice fed with high fat diet. It also could improve the antioxidant capacity and serum ALT and AST of liver in ApoE-knockout mice. In addition, metallothionein may play active role in the process of antioxidation.



# THE PROTECTIVE EFFECT OF ZINC SULPHATE ON OXIDATIVE DAMAGE OF LIVER IN APOE-KNOCKOUT MICE FED WITH HIGH FAT DIET

Jiang Jin-jin, Wang Hui-feng and Jiang Jin-jin

*Heart* 2012 98: E117-E118

doi: 10.1136/heartjnl-2012-302920b.18

---

Updated information and services can be found at:  
[http://heart.bmj.com/content/98/Suppl\\_2/E117.3](http://heart.bmj.com/content/98/Suppl_2/E117.3)

---

*These include:*

**Email alerting service**

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

---

**Notes**

---

To request permissions go to:  
<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:  
<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:  
<http://group.bmj.com/subscribe/>