POSTER PRESENTATION



Open Access

Physiologic parameters variation in ICR mice during a chemical induced liver carcinogenesis experiment

Ivo Conceição-Pereira^{1†}, Nuno M Paula-Santos^{1†}, Filipa O Pereira¹, Maria J Pires¹, Luis F Palomino², Aura A Colaço¹, Paula A Oliveira^{1*}

From 16th International Charles Heidelberger Symposium on Cancer Research Coimbra, Portugal. 26–28 September 2010

Hepatocellular carcinoma (HCC) is responsible for more then 600 000 deaths worldwide. HCC accounts for 85 to 90% of primary liver cancers [1]. Laboratory mouse is one of the best animal models to study cancer *in vivo* due to various features like the similarities to humans. Animal models that mimic human diseases are quite important to understand biopathology mechanisms underlying those diseases [2].

N-diethylnitrosamine (DEN) is a genotoxic carcinogen activated by a P450-dependent mono-oxigenase into a highly reactive molecule that will affect liver tissue [3].

The aim of this study was to evaluate the effect of DEN on 5 weeks old male ICR mice physiologic parameters. Mice were euthanized 7 and 14 weeks after last DEN injections. A thorough necropsy was performed and registered the weight and macroscopic evaluation of organs. Blood for hematocrit analysis was collected by cardiac puncture.

Some animals of the experimental group developed visible alterations in the liver. Significant values in biochemistry parameters between control/experimental groups were determined to alanine aminotransferase (p = 0.044) and total bilirrubin (p = 0.026).

Mean weight values were also significant between groups in the first euthanized mice (p = 0.048).

Author details

¹CECAV, Department of Veterinary Sciences, University of Trás-os-Montes e Alto Douro, Vila Real, Portugal. ²Department of Physiology, Veterinary Faculty, University of Santiago de Compostela, Lugo, Spain.

Full list of author information is available at the end of the article



© 2010 Oliveira et al; licensee BioMed Central Ltd.

Published: 24 September 2010

References

- Schütte K, Bornschein J, Malfertheiner P: HCC: epidemiological trends and risk factors. Dig Dis 2009, 27:80-92.
- 2. Leenders M, Nijkamp M, Rinkes I: Mouse models in liver cancer research: a view of current literature. *Worl J Gastroenterol* 2008, **14**:6915-6923.
- Lahm H, Gittner K, Krebs O, Sprague L, Deml E, Oesterle D, Hoeflich A, Wanke R, Wolf E: Diethylnitrosamine induces long-lasting re-expression of insulin-like growth factor II during early stages of liver carcinogenesis in mice. Growth Horm IGF Res 2002, 12:69-79.

doi:10.3748/wjg.14.6915

Cite this article as: Conceição-Pereira *et al.*: Physiologic parameters variation in ICR mice during a chemical induced liver carcinogenesis experiment. *BMC Proceedings* 2010 4(Suppl 2):P33.

Submit your next manuscript to BioMed Central and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

BioMed Central

Submit your manuscript at www.biomedcentral.com/submit

^{*} Correspondence: pamo@utad.pt

⁺ Contributed equally

¹CECAV, Department of Veterinary Sciences, University of Trás-os-Montes e Alto Douro, Vila Real, Portugal