THE 31ST MEETING OF THE
EUROPEAN SOCIETY & COLLEGE
OF VETERINARY PATHOLOGISTS
LONDON 2013

31st Meeting of the European Society of Veterinary Pathology

and the

European College of Veterinary Pathologists

4th – 7th September 2013

Programme

The Institute of Education
University of London
London, UK

ESVP

ecvp
European College of Veterinary Pathologists

RVC Royal Veterinary College University of London

THE 31ST MEETING OF THE EUROPEAN SOCIETY & COLLEGE OF VETERINARY PATHOLOGISTS LONDON 2013

Poster Abstracts
Other

PP-118

SMALL INTESTINE APOPTOSIS AFTER HAEMORRHAGE FOLLOWED BY VOLUME REPLACEMENT – A PRELIMINARY STUDY

Ana Ortiz1, Helena Vala2, Carla Garcia2, Rita Cruz2, Carlos Venâncio3, Aura Silva4, David Ferreira5

1 – University of León, Spain.
2 – CEETS-IPV Viseu, Portugal
3 – IBMC-Porto, Portugal
4 –REQUIMTE, Porto, Portugal
5 – CICV-ULHT, Lisboa, Portugal

liza.oliveira@gmail.com

Background: Apoptosis plays a key role in intestinal injury, as response to ischemia. Furthermore, reperfusion exacerbates abnormal intestinal apoptosis. In this study, the apoptotic index (AI) in the small intestine after haemorrhage and volume replacement with Ringer´s solution was evaluated, in a pig model.

Materials and Methods: 15 Large White pigs underwent total intravenous anaesthesia (TIVA) with propofol and remifentanil. In group1, animals underwent controlled bleeding and volume was replaced using Ringer's lactate. In group2 (control group), animals underwent TIVA, without any procedure. One hour after volume replacement, pigs were euthanized. Immunohistochemistry was performed, using *in situ* TUNEL method, in small intestine segments. National authority approval–DGV000228.

Results: AI of small intestine mucosa was, for group1, 41.68% (duodenum), 33% (jejunum) and 32.23% (ileum); group 2: AI was 36.44% (duodenum), 34.78% (jejunum) and 23.84% (ileum). AI was significantly higher in group1, in the ileum ($P<0.01$).

Discussion & Conclusions: Apoptosis occurred mainly in the epithelium of the villi, appearing to precede the intestinal mucosa desquamation described in ischemia situations; duodenum was the most affected intestinal segment. Although further studies are underway to corroborate Tunel results, is possible to conclude that, in a situation of hypoperfusion and volume replacement, small intestine undergoes a significant apoptotic rate, more severe in the duodenum.

Funding: FEDER-COMPETE Program, FCT, project COMPETE: FCOMP-01-0124-FEDER-009525