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Vrije Universiteit Brussel

FACULTEIT GENEESKUNDE EN FARMACIE

Doctoraat Medische Wetenschappen

Academiejaar 2008-2009

UITNODIGING

Voor de openbare verdediging van het
doctoraatsproefschrift van

Vincent UMBRAIN

donderdag 4 juni 2009

U wordt vriendelijk uitgenodigd op de openbare verdediging van het proefschrift van

Vincent UMBRAIN

'Optimising the therapeutic use of local anaesthetics. From microdialysis of the rat spinal cord and liposomal encapsulation, to clinical trials'

Situering van het proefschrift

Local anaesthetics (lidocaine, levobupivacaine, ropivacaine, bupivacaine) are useful analgesics. Administered for neuraxial or for nerve blockade, their use may however lead to harmful side effects.

We studied mechanisms and local side effects of local anaesthetics after intrathecal administration of lidocaine or levobupivacaine. We found transient increases of PGE₂, glutamate, aspartate and taurine in CSF dialysates in a in vivo spinal cord microdialysis setting of the rat. We suggested a relation with the clinically observed transient neurologic symptoms which is sometimes observed after intrathecal lidocaine administration.

We selected the most appropriate liposome type for neuraxial administration after a study of their extradural biodisposition in rats. In humans, pain relief and levels in plasma and in CSF after epidural administration of bupivacaine-encapsulated liposomes showed the limitations of our formulation and incited to further research.

We also investigated the most suitable ropivacaine dose for cervical plexus block. Doses of 225 mg or 150 mg did not show more toxicity than 112.5 mg but delivered a better quality of block both for the patient and the surgeon.

Curriculum Vitae

Vincent Umbrain was born in Bruges in 1961. He obtained his primary and secondary school degrees in 1978. He studied Medicine in Ghent from 1978-1985. He started his Anaesthesia training in the AZ-VUB in March 1986. Five years later, after a 6-month period in het Stedelijk Ziekenhuis of Roeselare and 1-year stay in the Erasmus Hospital in Brussels (ULB), he became a board certified anesthesiologist (1991). From then on, he stayed in the AZ-VUB to further develop his areas of interest: cardiovascular anaesthesia and fundamental research. He became a Diplomate of the European Academy of Anaesthesia and Intensive Care in 1990. He went to Paris, London and Rotterdam to learn the subtleties of the paediatric cardiac anaesthesia in 1992. He is a member of the Belgian Society of Anaesthesia and Reanimation, the European Society of Anaesthesiology (ESA) and of the American Society of Anesthesiology (ASA). He is currently working as a Chief of Clinic mainly covering cardiovascular anaesthesia in the Department of Anaesthesiology and Perioperative Medicine. He is part of a team developing an electronic anaesthesia chart data base covering the pre-, -per and postoperative period. His 24 publications (of whom 12 as a first author) cover laboratory and clinical investigations. He lectured 30 times in national and international presentations in regarded anaesthesia and neuroscience congresses. He presented 78 posters. Moreover, he is a regular reviewer for several international Journals.

Op **donderdag 4 juni** om **17 uur**
in auditorium **R. Vanden Driessche** van
de Faculteit Geneeskunde & Farmacie,
Laarbeeklaan 103, 1090 Brussel