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## Stimulation of periaqueductal gray: An animal model

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**Introduction:** The stimulation of periaqueductal gray represents the possibility of the whole body analgesia by the inhibition of spinal nociceptive neurons in theory. For this inhibition is responsible nucleus raphae magnus; the inception of descending serotonergic pathways. If it could be to change a theoretical possibility to practical use, it would mean a major advance in the treatment of pain.

**Material & Methods:** For the localization of an aqueductus was made sinusography and ventriculography of five pigs. Subsequently, the electrode was introduced through the lateral ventricle, then to the third ventricle and aqueduct under X-ray control. A subcutaneous formaline was applied before and after stimulation. The pulse and blood pressure was controlled for a whole time.

**Results:** The introducing of electrodes didn't have influence to blood pressure and pulse. The changes of these values was not occurred neither after the application of formaline. During subsequent stimulation and consecutive application of formaline the parameters were not changed again.

**Conclusion:** The introduction of electrodes into the aqueduct and the subsequent stimulation isn't the cause changes of the circulatory parameters so the introducing electrodes seem relatively safe. Analgesic effect of stimulation was not vindicated but these dates can be depend on the deep of general anesthesia.

### Biography

Vaclav Masopust has worked as a Secondary Doctor at the Neurosurgery Department of the Central Military Hospital, University Military Hospital from 1995 to 2013. In 2013 he started to work as a Deputy Chief Physician at the same workplace. He has completed his PhD from Charles University Prague. Since 2000 he has organized three courses regarding neuromodulation issues and one course regarding a facial trauma surgery. Since 2005 he has performed endoscopic operations of skull base. He has done more than 100 endoscopic surgeries since 2005. He has co-authored four books dealing with neurosurgery and has published 30 peer-reviewed articles in Czech and foreign journals in the field of surgical treatment of pain and neuromodulation. He has published or has co-authored 26 peer-reviewed articles in the field of the surgical treatment of skull base's lesions and mainly of pituitary adenomas.

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