Oculocardiac reflex

This is a slowing of the heart rate resulting from a reflex response to irritation of the eyeball and extraocular muscles. The reflex is also known as the Aschner-Dagnini reflex or trigeminal reflex.

Reflex arc

Afferent reflex pathway
: Irritation of the sensory endings of the nervus ophtalmicus in the orbit spreads to the ganglion trigeminale Gasseri. The stimulus then proceeds to the sensory nucleus of the *n. trigeminus* and then to the visceromotor centre of the *n. vagus*.

Efferent reflex pathway
: The stimulus is propagated via the n. X and its *rami cardiaci* to the sinoatrial node, where it exerts a negative chronotropic effect. A negative inotropic effect is also present.

Correlation

The oculocardiac reflex should be taken into account in ophthalmic surgery, where the surgical procedure may induce an undesirable drop in heart rate. Restoration of normal rhythm should occur after pressure is relieved, if this does not happen, it is necessary to administer acetylcholine antagonists - e.g. atropine.

The oculocardiac reflex, on the other hand, can serve as first aid in the event of an enormously increased heart rate - e.g. in the case of conditions approaching a myocardial infarction.

Links

Related articles

- Reflex

External links

- Oculocardiac reflex(english wikipedia) (https://en.wikipedia.org/wiki/Oculocardiac_reflex)

Used literature

- ČIHÁK, Radomír – GRIM, Miloš. *Anatomie 3.* 2., upr. a dopl edition. Grada, 2004. 673 pp. vol. 3. ISBN 80-247-1132-X.
- VARUN MALHOTRA,. , et al. Physiology of Oculocardiac reflex. *JAAIM-Online* [online]. -, y. -, vol. -, p. -, Available from <http://www.aaimedicine.com/jaaim/sep06/babaji_ocr2_1_.pdf>.
- Wikipedia. *Oculocardiac reflex* [online]. [cit. 2012-03-06]. <https://en.wikipedia.org/wiki/Oculocardiac_reflex>.