

Trigemino-cardiac/ oculocardiac reflex: a critical review

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Trigemino-cardiac reflex, and oculocardiac reflex as its well known subtype, may present as a shocking event through the course of surgery in craniomaxillofacial area. The most common manifestations include sinus bradycardia, a 10% to 20% decrease in the resting heart rate that is sustained for at least 5 seconds, which may in some cases be followed by atrioventricular block, ventricular bigeminy, ventricular tachycardia, and asystole. Several studies, especially in the field of ophthalmology and neurosurgery, have concerned the triggering factors, preventive measures, and mechanism of this phenomenon. The reflex shares many similarities to other reflexes like diving reflex, elicited by cold test for example, and is thought to be of oxygen preserving value for the brain. Although the reflex seems to be avoidable by the application of a less aggressive surgical approach, and treatable simply by ceasing the triggering procedure, there remain some cases of asystole and death. This might become even more of a concern given the fact that with there is no preventive measures available except for a less aggressive approach. This and the fact that still the underlying mechanism of the reflex is obscure were the reasons why the author of the present abstract has decided to review the most clinically important aspects of the phenomenon, highlight the recent physiological findings, discuss some controversies, and highlight our perspectives on trigemino-cardiac reflex with the reader.

Biography

Dr. Sadr-Eshkevari is a dentist graduated from Azad School of Dental Medicine, Tehran, Iran in late 2006, at the age of 26. He then became, along with the clinical practice, the Director of the Dental Section in Farzan Clinical Research Institute, the one and only Contract Research Organization of Iran. During this time he attended several externships with well known craniomaxillofacial surgeons of Iran and focused his research field in craniomaxillofacial surgery. He is now an invited researcher for the oral and maxillofacial plastic surgery of Ruhr University Bochum in Germany where he conducts researches on bone. By the time of this meeting he is expecting more than 20 printed papers in mainstream journals of craniomaxillofacial plastic surgery, dental implantology, and also neuroscience. His focus at the moment is on trigemino-cardiac reflex which is the result of his close cooperations with some of the internationally well-known researchers of the field.