Cushing reflex

The so-called Cushing reflex has been suggested to explain arterial hypertension. According to this mechanism, hypoperfusion of the rostroventral medulla induces sympathetic nervous system activation and a pressor response. The pressor response then increases perfusion of a primary brain area regulating sympathetic activity, but in doing so heightens systemic blood pressure. The initial hypoperfusion could arise as a result of narrowed vertebral arteries—evident as high resistance and low flow in these arteries. Although systemic hypertension might lead via remodeling to a narrowing of vertebral arteries, it has been suggested that hypertension is the result of narrowed vertebral arteries rather than the cause [1].

Cushing response categorization helps in identifying critical conditions and predicting outcome [2]

1)
DICKINSON CJ, THOMASON AD. Vertebral and internal carotid arteries in relation to hypertension and cerebrovascular disease. Lancet. 1959 Jul 18;2(7090):46-8. PubMed PMID: 13673588.
2)
Tsai YH, Lin JY, Huang YY, Wong JM. Cushing response-based warning system for intensive care of brain-injured patients. Clin Neurophysiol. 2018 Sep 21;129(12):2602-2612. doi: 10.1016/j.clinph.2018.09.010. [Epub ahead of print] PubMed PMID: 30453271.

From:
https://neurosurgerywiki.com/wiki/ - **Neurosurgery Wiki**

Permanent link:
https://neurosurgerywiki.com/wiki/doku.php?id=cushing_reflex

Last update: **2024/06/07 03:00**