

Brief communication: Neonatally administered capsaicin induces functional disturbances in the carotid afferent pathway to the nucleus tractus solitarius

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The effect of neonatal capsaicin treatment on chemo- and/or barosensory input to the medulla was studied in 35-40-day-old rats. By means of responses evoked in the nucleus tractus solitarius by stimulating the ipsilateral sinusal nerve, the excitability of slow-conducting carotid afferent fibers and the effect of substance P microinjection into the fourth ventricle were evaluated. Neonatal capsaicin resulted in reduced amplitude of the late component of the evoked responses, increased chronaxie values in the strength-duration paradigm, and increased sensitivity of evoked responses to the inhibitory effect of intracerebroventricular administered substance P. The results indicate that capsaicin given early in life leads to functional disturbances of chemo- and/or barosensory input to the nucleus tractus solitarius, involving both the slow-conducting primary afferents and the receptors for substance P of the secondorder cells of the sensory pathway. © 1992 Informa UK Ltd All rights reserv