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[\[PDF \(728K\)\]](#) [\[References\]](#)**Inhibitory effect of the nucleus reticularis pontis oralis on the pontine micturition center and pontine urine storage center in decerebrate cats**Kimio SUGAYA¹⁾, Saori NISHIJIMA¹⁾, Minoru MIYAZATO¹⁾, Masami ODA¹⁾ and Yoshihide OGAWA¹⁾

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ABSTRACT

The influence of the nucleus reticularis pontis oralis (PoO) on the pontine micturition center (PMC) and pontine urine storage center (PUSC) was examined in decerebrate cats by electrical and chemical stimulations of the PMC, PUSC or PoO. Microinjection of carbachol into the rostral and dorsolateral part of the PoO rapidly inhibited reflex micturition and external urethral sphincter (EUS) activity. After confirming the inhibition of reflex micturition and EUS activity by microinjection of carbachol into the PoO, intravenous injection of atropine sulfate or its microinjection into the PoO recovered both reflex micturition and EUS activity. Microinjection of carbachol into the PMC evoked micturition and then inhibited reflex micturition, but intravenous injection of atropine or its microinjection into the PoO recovered reflex micturition. After confirming the inhibition of reflex micturition and EUS activity by microinjection of carbachol into the PoO, electrical stimulation of the PUSC enhanced EUS activity, but electrical stimulation of the PMC failed to evoke micturition. However, electrical stimulation of the PMC evoked micturition after microinjection of atropine into the PoO. These results suggest that the PoO strongly inhibits the PMC and less strongly inhibits the PUSC. Therefore, the PoO seems to be the pontine micturition inhibitory area.

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