The effects of lesioning both the superior colliculus and the substantia nigra of cats on turning behavior.

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In twenty two adult cats, distributed in four groups, stainless steel electrodes were implanted in the superior colliculus and the substantia nigra of both sides in order: 1) to find the current intensity threshold values necessary to evoke turning behavior, and record their variations after lesion of the cited structures; 2) to study the effects of lesioning two of these structures, specifically related to the direction of turning behavior, and 3) to assess the time-course of recovery from postural asymmetry after damaging two structures involved in rotation behavior, located either in the same or in the opposite side, as well as the importance of performing these lesions simultaneously or at different periods. Three main results were observed: 1) a large proportion of lesioned cats showed an increase in threshold values necessary to evoke rotation of the implanted structures located either in the same or in the opposite side; 2) the lesions induced in a significant number of cats a t