Delayed treatment with Chondroitinase ABC improves forelimb deficits produced by endothelin-1 induced cerebral ischemia (stroke) in aged rats.

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Introduction
Ischemic stroke represents a leading cause of long-term neurological disability resulting in neuronal loss and sensorimotor impairments, with the vast majority of victims being the elderly. Whilst there is still no fully effective treatment to improve functional recovery after stroke, Chondroitinase ABC (ChABC) is a potential therapeutic candidate which has demonstrated effectiveness in restoring function after both spinal cord (Bradbury et al., 2002) and peripheral nerve injury (Galtrey and Fawcett., 2007).

Using our established model of stroke, we studied the effects of ChABC with/without rehabilitation to assess whether it could enhance neuroanatomical plasticity and lead to a better rehabilitative potential.

Methods
Forty one 16 month old male and female Long Evans rats (sham n = 5; stroke n = 36) underwent unilateral intraspinal drug injections with either ChABC (Seigaku; 10 U/ml; 1 µl 2 µl injections of ET-1 (CalBioChem; 200pmol, 0.5 µg/µl) into the sensorimotor cortex. Three days after...