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Acute sensitivity of astrocytes in the Substantia Nigra to oxygen and glucose deprivation (OGD) compared with hippocampal astrocytes in brain slices.

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Highlights

- Astrocytic responses to oxygen and glucose deprivation (OGD) were investigated in brain slice, an *in vitro* ischemia model.
- OGD depolarized astrocytes in the Substantia Nigra and reduced GFAP immunoreactivity.
- The membrane potential of nigral astrocytes did not repolarize during reperfusion (10–15 min).
- In contrast, hippocampal astrocytes did not show acute ischemic sensitivity.
- The ischemic impairment of nigral astrocyte function may contribute to sudden-onset vascular forms of parkinsonism.

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