■ Original article

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Epileptic Disorders

Altered vascular permeability but not angiogenesis may play a role in the epileptogenesis of human hippocampal sclerosis

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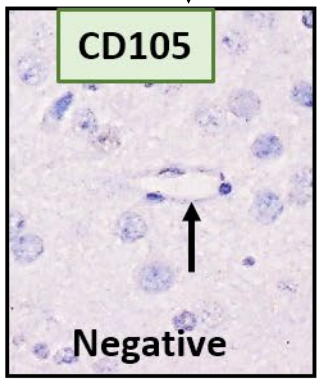
Epileptic Disorders

Altered vascular permeability but not angiogenesis may play a role in human hippocampal sclerosis

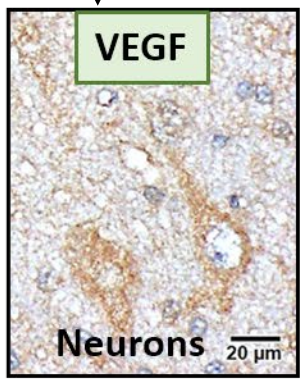
Cohort: 30 cases of hippocampal sclerosis – Type 1 (n=27), Type 2 (n=2), Type 3 (n=1) and 30 age matched non-epileptic controls

Angiogenesis



Marker of newly formed blood vessels

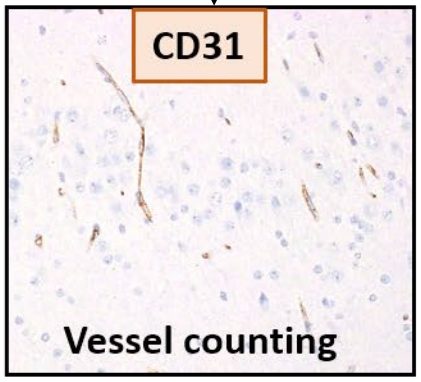
Negative for angiogenesis



Increased VEGF

Impaired vascular permeability

Vascular density

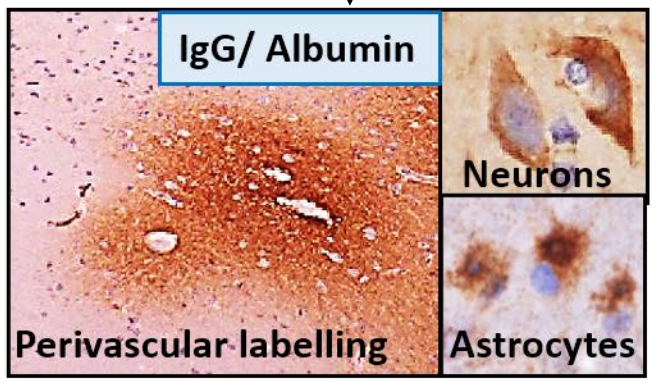


Relative increase

↓volume

↑vessels

Blood brain barrier integrity

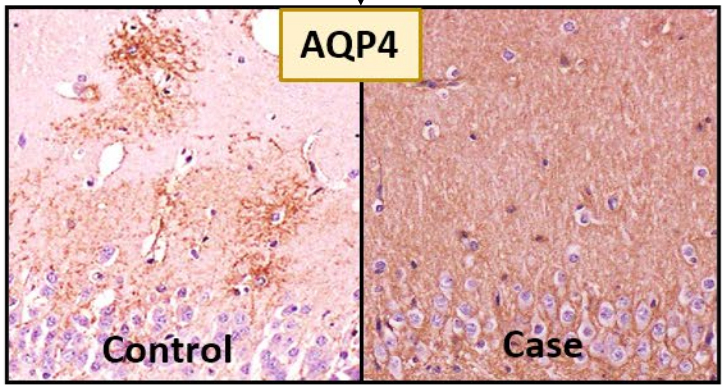


Perivascular leakage

Uptake by Neurons & astrocytes

Increased neuronal firing

Vascular remodelling



Redistribution of AQP4 from perivascular endfeet of astrocytes

Impaired flux of water & K+

Altered glia-vascular interface

Vascular factors contributing to epileptogenesis in human hippocampal sclerosis

Epileptic Disorders