

## Luxury perfusion phenomenon in acute herpes simplex virus encephalitis

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In a patient with acute herpes simplex virus (HSV) encephalitis, positron emission tomography (PET) demonstrated increased cerebral blood flow in the affected temporal lobe accompanied by reduction in the cerebral oxygen extraction fraction and the cerebral metabolic rate of oxygen, i.e., luxury perfusion. Follow-up PET studies showed reduction in cerebral perfusion until it was more closely coupled with oxygen metabolism after the resolution of the acute inflammation. These findings support previous single photon emission computed tomographic data and provide a pathophysiological background for the occurrence of hyperperfusion in HSV encephalitis. This is an interesting example of the luxury perfusion phenomenon occurring in a disease other than cerebral ischemia.

**Key words:** herpes simplex virus encephalitis, luxury perfusion phenomenon, positron emission tomography