spectroscopy study in basal ganglia of patients with myoclonic epilepsy with ragged-red fibers. Neurol India, 2007, 55:385-387.
[25] Mathews PM, Andermann F, Silver K, Karpati G, Arnold DL. Proton MR spectroscopic characterization of differences in regional brain metabolic abnormalities in mitochondrial encephalomyopathies. Neurology, 1993, 43:2484-2490.
[26] Shahwan A, Farrell M, Delanty N. Progressive myoclonic epilepsies: a review of genetic and therapeutic aspects. Lancet Neurol, 2005, 4:239-248.
[27] Mancuso M, Galli R, Pizzanelli C, Filosto M, Siciliano G, Murri L. Antimyoclonic effect of levetiracetam in MERRF syndrome. J Neurol Sci, 2006, 243(1/2):97-99.

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·临床医学图像·

超急性期缺血性卒中

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Hyperacute cerebral ischemic stroke

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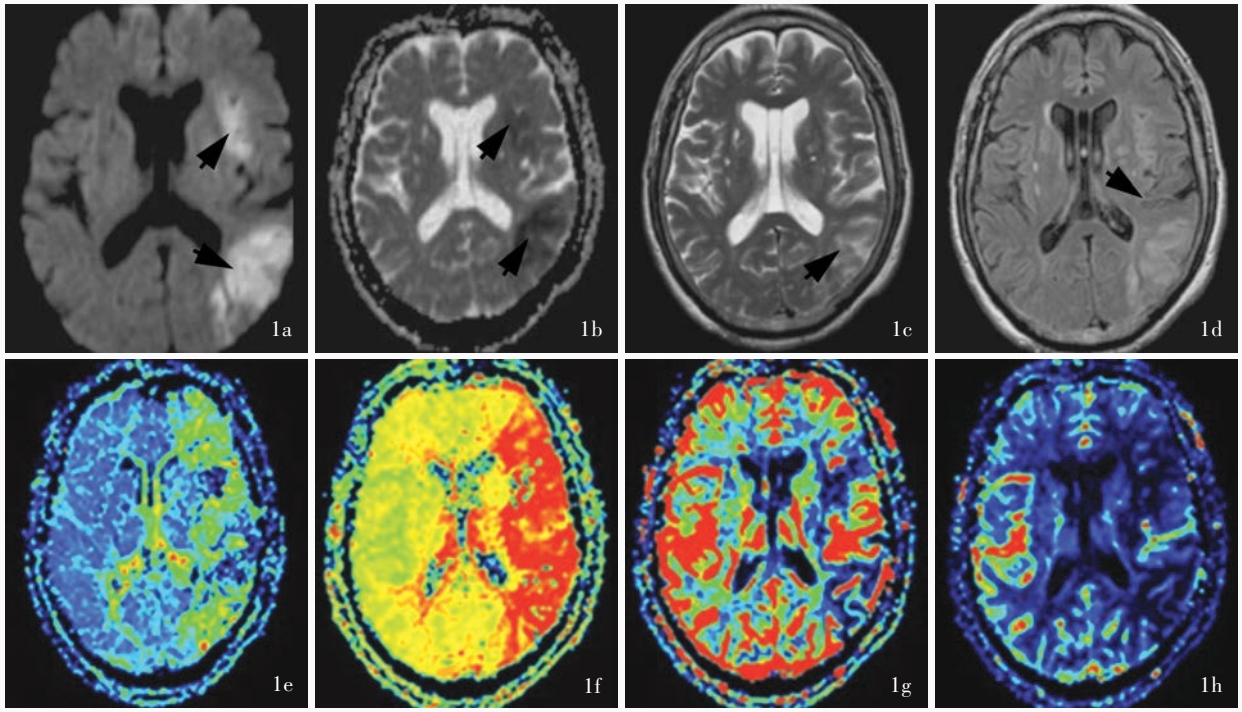

图1 男性患者，56岁。主因突发言语不清、右侧肢体活动不利4 h就诊。临床诊断：缺血性卒中。头部MRI检查所见 1a 横断面扩散加权成像（DWI）显示左侧额颞岛叶交界区、左侧颞枕叶交界区斑片状异常高信号（箭头所示），提示超急性期缺血灶 1b 横断面表观扩散系数（ADC）图显示上述区域异常低信号（箭头所示） 1c 横断面T_2WI显示左侧侧裂、颞枕叶交界区脑沟变浅（箭头所示） 1d 横断面FLAIR成像显示左侧侧裂内线样慢血流征（箭头所示） 1e 左侧大脑中动脉供血区及后分水岭区血流平均通过时间（MTT）明显延长（绿色区域所示） 1f 左侧大脑中动脉供血区及后分水岭区血流达峰值时间（TTP）明显延长（红色区域所示） 1g 脑血容量（CBV）图显示左侧岛叶、左侧颞枕叶交界区异常低灌注（蓝黑色区域所示） 1h 脑血流量（CBF）图显示左侧大脑中动脉供血区域信号明显降低（黑色区域所示），异常低灌注区面积大于DWI，提示存在缺血半暗带

Figure 1 A 56-year-old male patient was presented with sudden speech difficulty and myasthenia of the right limbs for 4 h and came to clinic. Clinical diagnosis was cerebral ischemic stroke. Axial DWI showed multiple high intensity lesions in the left junction of frontotemporal lobe and insula and left temporo-occipital lobe (arrows indicate), which suggested hyperacute infarct (Panel 1a). Axial ADC showed abnormal hypointensities in the same areas (arrows indicate, Panel 1b). Axial T_2WI detected no obviously abnormality except the shallowing of sulus in the left lateral fissure and temporo-occipital junction (arrow indicates, Panel 1c). Axial FLAIR indicated linear slow flow phenomenon in the left lateral fissure (arrow indicates, Panel 1d). MTT (green areas indicate, Panel 1e) and TTP (red areas indicate, Panel 1f) were prolonged significantly in left middle cerebral artery (MCA) providing blood area and posterior watershed area. There existed reduced CBV in left insula and temporo-occipital lobe (dark blue areas indicate, Panel 1g). Perfusion CBF map revealed reduced CBF in left MCA (black areas indicate). The mismatch between hpyoperfusion area and the infarction displayed in DWI suggested the existence of ischemic penumbra (Panel 1h).

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