Progression of Cerebrovascular Lesions in Pneumococcal Meningitis

Kenji Sakai¹, Kenjiro Ono¹, Keisuke Ohta¹ and Masahito Yamada¹

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A 50-year-old woman developed a sudden-onset headache. Consciousness disturbance and mild right hemiparesis appeared 1.5 hours after onset, but computed tomography scan was normal (Pictures 1A, B). Leptomeningeal contrast enhancement and edema were evident at 3.5 hours (Pictures 1C, D). Diffusion-weighted images (Pictures 2A, B), fluid-attenuated inversion recovery with gadolinium enhancement (Pictures 2C, D), and gradient-echo T2-weighted (Picture 2E) magnetic resonance images at 5.5 hours showed left temporal and subdural linear lesions with midline shift.

References

¹Department of Neurology and Neurobiology of Aging, Kanazawa University Graduate School of Medical Science, Kanazawa and ²Department of Emergency and Critical Care Medicine, Kanazawa University Graduate School of Medical Science, Kanazawa

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Correspondence to Dr. Kenji Sakai, ksakai@med.kanazawa-u.ac.jp
Magnetic resonance angiography and venography demonstrated no abnormalities. A diagnosis of bacterial meningitis with venous hemorrhagic infarcts and subdural empyema was made. Penicillin-sensitive *Streptococcus pneumoniae* were cultured from her blood. Hematoma and subdural empyema were evident on day 2 (Picture 2F).

Arterial or venous cerebrovascular complications are not rare in pneumococcal meningitis (1); however, vascular lesions are rare in the hyperacute phase of meningitis (2). We described serial radiologic findings showing the progression of venous hemorrhagic infarcts and subdural empyema in the hyperacute phase of pneumococcal meningitis.

References