In patients with intractable epilepsy refractory to medication, surgical treatment may be needed. Magnetic resonance imaging (MRI) is an essential neuroimaging tool in assisting the identification of epileptogenic lesions. MRI at 3T has been found to perform better than 1.5T in terms of image quality, detection of structural lesions, and characterization of lesions. Thus, high-field-strength imaging should be considered for patients with intractable epilepsy and normal or equivocal findings on 1.5T MRI (1). Quantitative processing of structural MR data and advanced MR imaging, such as diffusion tensor imaging and MR spectroscopy, has the potential to identify subtle lesions that may otherwise have been missed. In addition to MR imaging, magnetoencephalography, nuclear medicine studies, video-electroencephalographic findings, and invasive recording may be used to lateralize the seizure focus.

Definition of the epileptogenic zone during presurgical evaluation is challenging. The strategies used in these patients vary among different epilepsy surgery centers. Molecular imaging with ictal and interictal single photon emission computed tomography (SPECT) as well as positron emission tomography rank among the established functional imaging tests for presurgical evaluation of epileptic onset zone in patients with intractable epilepsy (2). However, conventional methods used to localize the ictal onset zone have problems with time lag from seizure onset to injection.

In this issue of *Acta Radiologica*, Dr. Lee and his co-workers (3) describe their 4-year experience of an attachable automated injector (AAI; device by Lee and Choi) in reducing time lag and improving the ability to localize the zone of seizure onset. AAI allows tracer injection by button push by the patient, the caregivers, or the medical personnel when noticing a seizure either clinically or using EEG monitoring with different routine techniques used in epilepsy laboratories. The total number of patients was 99: 48 patients were examined by conventional methods, while 51 were examined with help of an attachable automatic injector. The automatic injection technique shortens the mean delay compared to the manual injection technique. This is beneficial, especially in epilepsy originating outside the temporal lobe. SPECT findings analyzed with different methods were more often diagnostic using the new device. Injection between 4 and 20 s after seizure onset resulted in the best outcome. This article deals with a clinically relevant and very specific question. Although not absolutely novel, this retrospective analysis is well performed and written, and adds to our current knowledge on how to perform adequate ictal SPECT studies. This article is highly recommended reading.

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**References**