Evidence–based and precise radiology in epilepsy diagnosis

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Big data and digital medical technology develop rapidly. Analysis turning from “base on the past” to “for the coming future” is an important part of personalized medicine including personalized epilepsy diagnosis and treatment. Evidence–based and precise radiology plays a pivotal role in the diagnosis of pre-surgical patients with temporal lobe epilepsy (TLE). Electronic databases including Cochrane database, PubMed, national guideline clearinghouse provided the objective data for evidence reasoning. Image data processing (IDP) platform offered an integrated data analysis environment for efficient and collaborative biomedical image storage, analysis and visualization, which can improve workflow and enhance efficiency. A disease-specific and patient-oriented noninvasive MRI such as diffusion tensor imaging (DTI) tractography and functional connectivity map helped us to better characterize TLE and ultimately assisted in providing a better diagnosis and more accurate invasive treatments of TLE. MRI enables us an individualized, personalized precision medical imaging, which is an important precondition for clinical 3D printing and precise epilepsy invasive treatments. In future, precision medical diagnosis and treatment would lead the new trend of health management in patients with epilepsy.

Biography

Wei Chen is a Licensed Radiologist. She is both MRI and Infectious Disease Chapter Committee Member of Radiology of Chinese Medical Association. She was awarded MD from Tongji Medical School of Huazhong University of Science and Technology in China. She was awarded Master’s degree in Computer Science from Southeastern University in Washington, DC, USA. She earned the Advanced Training in Multimodal Neuroimaging Program offered by University of Pittsburgh and Carnegie Mellon University with funding from National Institutes of Health, and completed a 5 years’ Neuroimaging Post-doctoral Training at University of Massachusetts Medical School, USA. She has published more than 10 papers in reputed journals.

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