Workflow Across Geographies & Cultures: Korea

JEONG MIN LEE, M.D.

Magnetic resonance imaging (MRI) provides exquisite anatomic detail through its superior tissue contrast, flexible imaging planes, and tissue-characterization capabilities. In Korea, while these imaging benefits were initially realized in the central nervous system, technological improvements in recent years have facilitated the use of MRI throughout the body, including for musculoskeletal, cardiovascular, breast, and abdominal-pelvic applications. In fact, recent developments in MR imaging technology provide shorter imaging times and improved resolution, providing improved tissue characterization and enhanced diagnostic accuracy. These improvements complement the strides made in CT imaging technology, and the two modalities provide very powerful and complementary methods for the investigation of cardiopulmonary disease, hepatobiliary disease, and genitourinary disease. In addition, breast MRI has become an integral and necessary component of any breast imaging practice due to the basic strength of breast MRI which lies in the detection of cancer that is occult on conventional imaging such as mammography and sonography. In fact, our current algorithms in the detection and treatment of breast cancer have been changed by the availability of breast MRI. Furthermore, MR imaging is poised to realize its potential of going beyond morphology and providing functional information about organ physiology and tumor pathophysiology. Given the increasing scope and utilization of imaging in daily practice, the nonionizing aspect of MRI is particularly notable and may be an important incentive for its progressive integration into more clinical algorithms. As a result, MRI was ranked the top medical innovation by physicians in Korea. In a 2010 study on medical imaging in Korea, it was found that Korea had 19.7 MRI scanners per million population and 34.9 CT scanners per million. In Korea, all emergency patients receive MRIs within 24 hours, and the maximum elective wait time is approximately 3 weeks. This presentation will address the current practices of MRI including major clinical application areas, difficulties or technical limitations, and the impact of MRI practice and access on healthcare in Korea.