Abdomen MRI Symposium l: Special focus session_EOB-MRI Intergration into concensus statements across the globe

SY03-1

LI-RADS v2017

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The Liver Imaging Reporting and Data System (LI-RADS), supported and endorsed by the American College of Radiology (ACR), is a comprehensive system for standardizing the acquisition, interpretation, reporting, and data collection of liver imaging. Using the LI-RADS, hepatic observations in patients at risk for hepatocellular carcinoma (HCC) can be categorized by reflecting the likelihood levels of HCC and of non-HCC malignancies. The CT/MRI LI-RADS v 2017 accept the use of CT and MRI with extracellular agents (ECA) as well as MRI with hepatobiliary agents including gadoxetic acid. As gadoxetic acid-enhanced MRI (Gd-EOB-MRI) provides a transitional phase (TP) instead of a conventional delayed vascular phase, and a hepatobiliary phase (HBP) in addition to dynamic phases, the LI-RADS specify guidelines for the interpretation of TP and HBP of Gd-EOB-MRI. In this lecture, I will review the diagnostic algorithms of the LI-RADS v2017, major and ancillary imaging features focused on differences between Gd-EOB-MRI and ECA-enhanced imaging, and recent studies regarding the performances of the LI-RADS on Gd-EOB-MRI.

Keywords : LI-RADS, HCC, Liver, MRI, Gadoxetic acid

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SY03-2

Japanese Society of Hepatology Consensus/Evidence-based Guidelines

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In the era of evidence-based medicine, guideline or manual authorized by established groups are commonly used in the clinic including the management of cirrhotic patients. In Japan, there had been two guideline/manual for the diagnosis/treatment of liver cancers; evidence-based guideline for liver cancer published in 2013 and consensus-based manual for the clinical practice of liver cancer published in 2015 both from Japanese Society of Hepatology. Since these two were based on different methods, the contents were a little contradicted one another. In order to solve this issue, Japanese Society of Hepatology published a new guideline in 2017, which is technically based on the evidence. Compared to the Western guidelines, one of the most significant feature of this Japanese guideline is that “wash-out” can be called by gadoxetic acid-enhanced hepatobiliary phase image. It clearly increases the sensitivity of diagnostic ability of MRI for HCCs. Another characteristic of this guideline is that it defines the size criteria for follow-up/work-up of borderline nodules with either hypervascularity or non-hypervascularity in hepatic arterial phase images. For example, hypervascular nodule without wash-out in the cirrhotic liver cannot be diagnosed as HCC. This guideline proposes to divide these nodules into two groups by size. Nodule of ³1.0cm requires further work-up, while nodule of <1.0cm is followed up with imaging.

In this talk, I will cover the basic concepts of this guideline and discuss how we assess the MRI to make imaging-based diagnosis of HCCs in the clinic.

Keywords : Liver, MRI

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SY03-3

2016 Consensus recommendation by Korean Society of Abdominal Radiology

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Diagnosis of hepatocellular carcinoma (HCC) with gadoxetic acid-enhanced liver magnetic resonance imaging (MRI) poses certain unique challenges beyond the scope of current guidelines. The regional heterogeneity of HCC in demographic characteristics, prevalence, surveillance, and socioeconomic status necessitates different treatment approaches, leading to variations in survival outcomes. Considering the medical practices in Korea, the Korean Society of Abdominal Radiology (KSAR) study group for liver diseases has developed expert consensus recommendations for diagnosis of HCC by gadoxetic acid-enhanced MRI with updated perspectives, using a modified Delphi method. During the 39th Scientific Assembly and Annual Meeting of KSAR (2016), consensus was reached on 12 of 16 statements. These recommendations might serve to ensure a more standardized diagnosis of HCC by gadoxetic acid-enhanced MRI.

Keywords : KSAR, Hepatocellular carcinoma, Gadoxetic-acid, MRI

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SY03-4

2018 Korean Liver Cancer Study Group-National Cancer Center Korea Practice Guidelines for the Management of Hepatocellular Carcinoma

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The new guidelines for the management of hepatocellular carcinoma (HCC) by the Korean Liver Cancer Study Group (KLCSG) and the National Cancer Center (NCC) will be presented in 2018. Since its latest update in 2014, many high-level evidences including well-designed clinical studies and meta-analysis in diagnostic evaluation of patients with suspected HCC have been accumulated. This current update is needed to reflect changes and advances. Important changes regarding the diagnosis of HCC in the current update include the following: (a) an alternative surveillance method such as CT and MRI in case limited performance of US is expected; (b) a sequential diagnostic examination if the first-line imaging study fails to establish the diagnosis of HCC; (c) the categorization of the risk of HCC in lesions detected in surveillance test, i.e., “probable HCC” and “definite HCC” using major and ancillary imaging features; (d) the extended definition of washout appearance on the hepatobiliary phase if a hepatobiliary contrast agent is used for MRI examination; and (e) an introduction of contrast-enhanced US using blood-pool US contrast agents as a second-line examination. These changes in new KLCSG-NCC Korea Practice Guidelines are intended to reflect our clinical practices taking care of unique medical environments in Korea, improve its clarity in interpretation and reporting of lesions suspicious of HCC, and expand horizons for upcoming changes in the field of radiology.

Keywords : Liver, Hepatocellular Carcinoma, Neoplasms, Guidelines