PEER-REVIEW REPORT

Name of journal: World Journal of Gastroenterology

Manuscript NO: 53701

Title: Pearls and pitfalls in magnetic resonance imaging of hepatocellular carcinoma

Reviewer's code: 03699961

Position: Peer Reviewer

Academic degree: MD

Professional title: Professor

Reviewer's Country/Territory: Japan

Author's Country/Territory: Serbia

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Reviewer chosen by: Ruo-Yu Ma

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Review time: 1 Day and 6 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
[ ] Grade A: Excellent	[Y] Grade A: Priority publishing	[ ] Accept (High priority)	Peer-Review:
[Y] Grade B: Very good	[ ] Grade B: Minor language polishing	[ ] Accept (General priority)	[Y] Anonymous
[ ] Grade C: Good	[ ] Grade C: A great deal of language polishing	[Y] Minor revision	[ ] Onymous
[ ] Grade D: Fair	[ ] Grade D: Rejection	[ ] Major revision	Peer-reviewer's expertise on the topic of the manuscript:
[ ] Grade E: Do not publish		[ ] Rejection	[Y] Advanced
			[ ] General
			[ ] No expertise
			Conflicts-of-Interest:
			[ ] Yes
			[Y] No

SPECIFIC COMMENTS TO AUTHORS

Title: Pearls and pitfalls in MR imaging of Hepatocellular Carcinoma.   Jelena Djokic Kovač, Tamara Milovanovic, Vladimir Dugalic and Igor Dumic.   1) General Comments In this manuscript, the authors neatly summarized characteristics of MR imaging of hepatocellular carcinoma by showing many representative images of actual cases including patients with rare types of hepatocellular carcinoma. The information is helpful in clinic to diagnose a liver tumor. There are several points, however, to increase the value of this manuscript further. The followings are concerns that the authors may wish to consider: 2) Specific comments Major concerns: 1. There are many types of contrast medium available in an MRI study for hepatocellular carcinoma. Especially gadoxetic acid, which chelates a gadolinium ion with the moiety of ethoxybenzyl diethylenetriaminepentaacetic acid, reveals not only flow dynamics in the liver but also function of hepatocytes in a hepatobiliary phase. It is helpful to summarize characteristics of contrast agents available in an MRI study for hepatocellular carcinoma. 2. It is important to keep it in mind that the iso or hyper intensities in hepatobiliary phase indicates that the tumor is consisting of the hepatocytes. It is precious information for differential diagnosis of a tumor in the liver. 3. The hypervascularity in arterial phase is one of the key determinants for the diagnostic imaging of hepatocellular carcinoma and should not be determined only by CT/MRI study, because in CT/MRI study the images in arterial phase are taken at a certain time point through the time course of a contrast study. That time point may not be always the best moment to evaluate hypervascularity of hepatocellular carcinoma. It is quite important to evaluate hypervascularity by observing flow dynamics throughout the entire time course of a contrast study using ultrasound. 4. MRI including the subtraction technique is useful for determining contrast enhancement for the lesion with high precontrast T1 signal intensity.   Minor concerns: 1. Although the authors stated that hepatocellular carcinoma predominantly arises in a cirrhotic liver with estimated 5 years incidence of 25%, the

incidence is quite different among different background liver diseases. 2. Ancillary, a typo in TYPICAL MRI FEATURES OF HEPATOCELLULAR CARCINOMA section, 2nd paragraph, 4th line from the bottom. 3. In terms of organic anion-transporting polypeptide, there are several subtypes. Please specify the subtypes, which are involved in the uptake of gadoxetic acid in hepatocytes. 4. In the Figure 1, it is better to show a T1-weighted image before an injection of contrast medium to show the vascularity. 5. Hypervascular, a typo in the Figure 5D. 6. In the Figure 6, it is better to indicate portal vein thrombosis by arrows or something. 7. In the Figure 7, it is better to indicate the area that shows hypervascularity and washout. 8. In Scirrhous HCC section, the authors referred the report suggesting that T2-weighted central darkness and the presence of capsule are significant and independent MRI predictors for scirrhous HCC. If these characteristic features are shown in the Figure 11, it is better to indicate them. 9. I am wondering that the arrows may indicate incorrect points in the Figure 14A.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

[   ] The same title

[   ] Duplicate publication

[   ] Plagiarism

[Y] No

BPG Search:

[   ] The same title

[   ] Duplicate publication

[   ] Plagiarism

[Y] No