World Journal of

Gastrointestinal Surgery

WJGS World Journal of Gastrointestinal Surgery

Contents

Contents

Contents

ABOUT COVER

Editorial Board Member of *World Journal of Gastrointestinal Surgery*, Chong-Chi Chiu, MD, Attending Doctor, Professor, Surgeon, Department of General Surgery, E-Da Cancer Hospital, Kaohsiung 82445, Taiwan. chiuchongchi@yahoo.com.tw

AIMS AND SCOPE

The primary aim of *World Journal of Gastrointestinal Surgery* (*WJGS*, *World J Gastrointest Surg*) is to provide scholars and readers from various fields of gastrointestinal surgery with a platform to publish high-quality basic and clinical research articles and communicate their research findings online.

WJGS mainly publishes articles reporting research results and findings obtained in the field of gastrointestinal surgery and covering a wide range of topics including biliary tract surgical procedures, biliopancreatic diversion, colectomy, esophagectomy, esophagostomy, pancreas transplantation, and pancreatectomy, *etc*.

INDEXING/ABSTRACTING

The *WJGS* is now abstracted and indexed in Science Citation Index Expanded (SCIE, also known as SciSearch®), Current Contents/Clinical Medicine, Journal Citation Reports/Science Edition, PubMed, and PubMed Central. The 2021 edition of Journal Citation Reports® cites the 2020 impact factor (IF) for *WJGS* as 2.582; IF without journal self cites: 2.564; 5-year IF: 3.378; Journal Citation Indicator: 0.53; Ranking: 97 among 212 journals in surgery; Quartile category: Q2; Ranking: 73 among 92 journals in gastroenterology and hepatology; and Quartile category: Q4.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: *Rui-Rui Wu*; **Production Department Director:** *Xiang Li*; **Editorial Office Director:** *Ya-Juan Ma*.

LETTER TO THE EDITOR

Providing higher value care for hepatocellular carcinoma rather than diagnosis: What can current radiologists do?

Shan Yao, Yi Wei, Bin Song

Shan Yao, Yi Wei, Bin Song, Department of Radiology, West China Hospital, Sichuan University, Chengdu 610041, Sichuan Province, China

Corresponding author: Bin Song, MD, PhD, Chief Doctor, Director, Professor, Department of Radiology, West China Hospital, Sichuan University, No. 37 Guoxue Alley, Wuhou District, Chengdu 610041, Sichuan Province, China. cjr.songbin@vip.163.com

Abstract

Medical imaging is of great value for the comprehensive evaluation of hepatocellular carcinoma from diagnosis to prognosis, which contributes to optimal clinical management making.

Key Words: Hepatocellular carcinoma; Medical imaging; Clinical management

Core Tip: Medical imaging plays a vital role in the accurate diagnosis and grading of hepatocellular carcinoma as clinical treatment decision-making. Moreover, it is of powerful value for noninvasively preoperative evaluation of the treatment outcomes, prognosis, and survival with high sensitivity and repeatability. The comprehensive assessment involving preoperative, perioperative, and postoperative indicators for treatment option selection will assist surgeons precisely and maximize the benefits for patients.

TO THE EDITOR

In the current issue, we read with interest a retrospective study by Delvecchio *et al*[1], where liver resection (LR) and radiofrequency ablation (RFA) were evaluated as the

treatment of choice for single hepatocellular carcinoma (HCC) (≤ 30 mm) located in posterosuperior segments (PSS) in elderly patients. Based on operative time, hospital stay, and short- and long-term outcomes, RFA was recommended as a suitable option.

The critical value of tumor size for LR or RFA differs in various criteria and guidelines, most of which is 20 mm. Single HCC with a tumor size of ≤ 30 mm was mainly targeted in this study. Locations with difficulties in surgery (PSS) and age (for the elderly ≥ 70 years old) were considered while making the treatment decision. It offered an insightful perspective and a specific focus, providing a supplement to this field with certain guiding significance for clinical management practice.

As described in the study, all subjects underwent computed tomography (CT) or magnetic resonance imaging (MRI) before treatment to access the tumor location and size, which are the two key points of this study. The diagnosis and stage of HCC were based on the European Association for the Study of the Liver criteria[2], which also regard medical imaging manifestations as a dominant support. Thus, medical imaging plays a vital role in the accurate diagnosis and qualitative evaluation of HCC. Along with morphological features, such as tumor location and size, satellite nodules, portal vein embolus, and invasion of adjacent tissues can be evaluated using CT or MRI, which are also of prognostic significance for patients with HCC after treatment.

Apart from the abovementioned perioperative and postoperative indicators for selecting treatment option, preoperative evaluation can be performed using noninvasive medical imaging with high sensitivity and repeatability. In a study by Cha *et al*[3], pretreatment imaging was utilized to compare the outcomes of RFA and LR for HCC ≤ 30 mm, and a high positive predictive value was achieved. Burgeoning functional imaging technologies, such as gadoxetic acid-enhanced MRI, intravoxel incoherent motion, T1 mapping, have enabled insightful assessment of microvascular invasion, hepatocyte membrane function, hepatocyte density changes, tissue microcirculation, and liver reserve function. Meanwhile, artificial intelligence-imaging combining radiomics has been empowering deep data mining of CT or MRI images of HCC from diagnosis to prognosis. In prior studies, we found that preoperative CT imaging combined with clinical features could predict the rate of liver regeneration after right hepatectomy for HCCs with an accuracy of 0.78 and an area under the curve (AUC) of 0.84 [4]. Gadoxetic acid-enhanced MRI-derived features showed great potential for preoperative prediction of early recurrence of LR for HCCs, with the related model demonstrating a significant AUC of 0.841 (95%CI: 0.769-0.919)[5]. Taken together, medical imaging is closely related to optimal treatment decision-making and survival quality for patients. In future clinical practice, it is necessary to take full advantage of medical imaging to comprehensively evaluate tumor and liver conditions preoperatively as a treatment plan trade-off, so as to maximize the benefits for patients with HCC and meet the demands of precision medicine.

FOOTNOTES

Author contributions: Yao S and Song B designed the research; Yao S and Wei Y conducted literature search and analysis; Yao S wrote the letter and made critical revisions to the letter; Song B and Wei Y provided material and funding support for the article.

ORCID number: Shan Yao 0000-0002-0665-2566; Yi Wei 0000-0003-3993-9747; Bin Song 0000-0001-7007-6367.

REFERENCES

1   **Delvecchio A**, Inchingolo R, Laforgia R, Ratti F, Gelli M, Anelli MF, Laurent A, Vitali G, Magistri P, Assirati G, Felli E,

Wakabayashi T, Pessaux P, Piardi T, di Benedetto F, de'Angelis N, Briceño J, Rampoldi A, Adam R, Cherqui D, Aldrighetti LA, Memeo R. Liver resection vs radiofrequency ablation in single hepatocellular carcinoma of posterosuperior segments in elderly patients. *World J Gastrointest Surg* 2021; **13**: 1696-1707 [PMID: 35070074 DOI: 10.4240/wjgs.v13.i12.1696]

2   **European Association for the Study of the Liver**. EASL Clinical Practice Guidelines: Management of hepatocellular carcinoma. *J Hepatol* 2018; **69**: 182-236 [PMID: 29628281 DOI: 10.1016/j.jhep.2018.03.019]

3   **Cha DI**, Song KD, Kang TW, Lee MW, Rhim H. Small masses (≤3 cm) diagnosed as hepatocellular carcinoma on pre-treatment imaging: comparison of therapeutic outcomes between hepatic resection and radiofrequency ablation. *Br J Radiol* 2020; **93**: 20190719 [PMID: 31670571 DOI: 10.1259/bjr.20190719]

4   **Zhang T**, Wei Y, He X, Yuan Y, Yuan F, Ye Z, Li X, Tang H, Song B. Prediction of Remnant Liver Regeneration after Right Hepatectomy in Patients with Hepatocellular Carcinoma Using Preoperative CT Texture Analysis and Clinical Features. *Contrast Media Mol Imaging* 2021; **2021**: 5572470 [PMID: 34220379 DOI: 10.1155/2021/5572470]

5   **Zhang Z**, Jiang H, Chen J, Wei Y, Cao L, Ye Z, Li X, Ma L, Song B. Hepatocellular carcinoma: radiomics nomogram on gadoxetic acid-enhanced MR imaging for early postoperative recurrence prediction. *Cancer Imaging* 2019; **19**: 22 [PMID: 31088553 DOI: 10.1186/s40644-019-0209-5]

Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-3991568
E-mail: bpgoffice@wjgnet.com
Help Desk: https://www.f6publishing.com/helpdesk
https://www.wjgnet.com