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Long-term Oncologic Outcomes of Liver Resection for Hepatocellular Carcinoma in Adolescents and Young Adults: A Multicenter Study from A Hepatitis B Virus-endemic Area

Yong-Kang DIAO[1], Jun-Wei LIU[1], Wan Yee LAU[3], Xin-Ping FAN[4], Ting-Hao CHEN[5], Ya-Hao ZHOU[6], Wei-Min GU[7], Hong WANG[8], Jie LI[9], Ying-Jian LIANG[10], **Tian YANG**[1, 2]

[1] *Hepatobiliary Pancreatic and Minimal Invasive Surgery, Zhejiang Provincial People's Hospital (People's Hospital of Hangzhou Medical College), China*
[2]*Hepatobiliary Surgery, Eastern Hepatobiliary Surgery Hospital, Second Military Medical University (Navy Medical University), China*
[3]*Faculty of Medicine, The Chinese University of Hong Kong, China*
[4]*General Surgery, Pingxiang Mining Group General Hospital, China*
[5]*General Surgery, Ziyang First People's Hospital, China*
[6]*Hepatobiliary Surgery, Pu'er People's Hospital, China*
[7]*General Surgery, The Fourth Hospital of Harbin, China*
[8]*General Surgery, Liuyang People's Hospital, China*
[9] *Hepatobiliary Surgery, Fuyang People's Hospital, China*
[10]*Hepatobiliary Surgery, The First Affiliated Hospital of Harbin Medical University, China*

Introduction : Hepatocellular carcinoma (HCC) is common among adolescents and young adults (AYAs) with chronic hepatitis B virus (HBV) infection in areas with endemic HBV. We sought to characterize clinical features and long-term oncologic outcomes among AYAs versus older adults (OAs) who underwent liver resection for HCC.

Methods : Patients undergoing curative-intent liver resection for HCC were identified using a Chinese multicenter database; patients were categorized as AYA (aged 13-39 years) versus OA (aged ≥ 40 years). Patient clinical features, perioperative outcomes, overall survival (OS) and time-to-recurrence (TTR) were evaluated and compared. Multivariable Cox-regression analyses were performed to identify the impact of age relative to the risk factors associated with OS and TTR.

Results : Among 1,952 patients with HCC who underwent resection, 354(22.2%) were AYAs. AYAs were less likely to have cirrhosis or portal hypertension yet were likely to have advanced tumor pathological characteristics than OAs. Although major hepatectomy was more often performed in the AYA group, postoperative morbidity and mortality were comparable between the AYA and OA groups. Compared with OAs, the AYAs had a comparable OS (median: 88.8 vs. 93.2 months, P=0.305) but a decreased TTR (median: 35.6 vs. 50.7 months, P=0.029). After adjustment for other confounding factors on multivariable analyses, young age (<40 years) was independently associated with poorer TTR (hazard ratio: 1.35, 95% confidence interval: 1.08-1.69, P=0.009) but not OS (P=0.15).

Conclusions : Compared with OAs, AYAs had a higher incidence of recurrence following liver resection among Chinese patients with HCC, suggesting that enhanced surveillance for postoperative recurrence may be required among

Corresponding Author. : **Tian YANG** (yangtianehbh@smmu.edu.cn)