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Impact of neo-glasgow prognostic score based on albumin-bilirubin grade for prognostic prediction following hepatectomy of hepatocellular carcinoma: retrospective study using Korea and Japan individual patient data.

Hisashi KOSAKA

Surgery, Kansai Medical University, Japan

Lecture :

Objectives:

The Glasgow prognostic score (GPS), which uses C-reactive protein (CRP) and serum albumin cutoff values of 1.0 mg/dL and 3.5 g/dL, respectively, has been shown as an important and useful nutritional assessment tool for predicting prognosis in patients with malignant tumors. However our pilot study which retrospectively analyzed 271 patients with hepatocellular carcinoma (HCC) revealed that GPS could not predict prognosis precisely in patients with HCC. On the other hand, applicant have recently introduced neo-GPS, which replaces albumin level with albumin-bilirubin (ALBI) grade, which can discern borderline amino acid imbalance, as a prediction tool for the prediction of postoperative complications and prognosis in patients undergoing surgical HCC resection. In this project study, we will externally validate the prognostic accuracy of neo-GPS to establish a reliable prognostic indicator for patients who undergo hepatectomy.

Methods:

The medical records of all patients with HCC who underwent hepatectomy in Korea and Japan between 2010 and 2020 will be screened. During the study period, patients with HCC and Child-Pugh class A liver function who underwent R0 resection, defined as the macroscopic removal of all tumor lesions, will be enrolled in the present multicenter retrospective study. Simple data such as preoperative, peri-operative and their prognostic data will be collected. Statistical analysis will be independently performed by expert of medical statistics.

Possible effects:

The neo-GPS may be considered an important prognostic predictive assessment tool in patients with HCC. The liver damage classification is considered to be more suitable than the Child-Pugh classification for prognostic prediction in patients undergoing surgical resection. On the other hand, the ALBI score exhibits functions as a more detailed assessment tool than the liver damage classification. Moreover, the ALBI score can act as an indicator of nutritional status based on its demonstrated good relationship with PNI. In addition, CRP is an important biomarker for the prognosis, recurrence, and treatment response in adult solid tumors. The neo-GPS score, which utilizes the ALBI grade and CRP, will demonstrate the best predictive ability not only for prognosis but also for high-grade Clavien-Dindo complications.

Prospect for spillover effects:

The neo GPS may be applicable for other liver diseases such as intrahepatic cholangiocarcinoma and hilar cholangiocarcinoma which required hepatectomy. The neo-GPS may become a representative prognostic assessment tool which specialized for patients who will undergo hepatectomy. Topics: Previous project studies between Korea and Japan already demonstrated significant results of surgical and oncological problems of the liver, whereas this is the first study elucidating the relationship between function of the

liver and prognosis. This study may have a potential to establish the new standard indicator for therapeutic strategy instead of ICG and the liver damage classification. This study requires very simple data which is usually collected on usual data base of hospitals. Data collection will be easily completed.