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Preoperative nutritional status in patients undergoing liver transplantation

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Protein-energy malnutrition is common in patients requiring liver transplantation (LT). However, their nutritional parameters characteristics remain unclear.We examined various nutritional parameters upon admission in 226 consecutive adult patients who underwent LTbetween February 2008 and August 2012;correlations with Child-Pugh (CP) classification, original disease, skeletal muscle mass (SMM) and zinc (Zn) levels.CP-A patients had higher Zn, prealbumin (PA) and branched-chain amino acids (BCAAs)-to-tyrosine (TYR) ratio (BTR) than those with CP-B or CP-C. When patients were grouped whether or not they received BCAAs before admission, TYR levels were higher among those with CP-C than with CP-A/B (P=0.025) who did not receive BCAAs, but did not differ in those administered with BCAAs. BTR was lower in patients with CP-C than with CP-A/B in both groups (P=0.001 and P=0.010, respectively), whereas BCAAs did not differ between patients with CP-A/B and CP-C in either group.SMM correlated positively with TYR (r=0.435, P<0.001) and BCAAs (r=0.193, P=0.029) but negatively with BTR (r=0.272, P=0.002). Zn correlated positively with PA (r=0.457,P<0.001) and BTR (r=0.261,P<0.001) but negatively with ammonia (r=-0.172,P=0.014) and TYR (r=-0.197,P=0.005).Acute liver failure patients had the highest ammonia, Zn, TYR, lowest BTRwith relatively low BCAAs and high PA while alcoholic cirrhosis patients had the highest BCAAs and TYR mean levels. Hepatocellular carcinoma patients had higher BCAAs than cholestatic diseases patients who had the lowest BCAAs and Zn mean levels. Pre-transplant disease, SMM and Zn play important roles in amino acid metabolism and nutrition.Evaluation of said parameters is recommended to tailor peri-LT nutritional regimens.

Biography

Ahmed Hammad has completed his MD degree and finished GIT surgery residency, finished a master degree in Mansoura University, Egypt. He was appointed as an attending surgeon and assistant lecturer of surgery in Mansoura university hospital. He is now pursuing living donor liver transplantation clinical fellowship and Ph.D. degree at department of HBP surgery and transplantation, graduate school of medicine, Kyoto University, Japan.

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