

ABSTRAK

Hubungan Antara Sarkopenia dan Mortalitas Pada Pasien Karsinoma Hepatoseluler Setelah *Transarterial Chemoembolization* Pertama

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Latar Belakang: Karsinoma hepatoseluler (KHS) adalah keganasan primer hati yang menjadi masalah kesehatan dunia. *Transarterial chemoembolization* (TACE) direkomendasikan pada KHS stadium intermediet. Mortalitas KHS terkait resistensi insulin, defisiensi vitamin D, peningkatan sitokin inflamasi dan sarkopenia. Sarkopenia adalah kehilangan masa otot skeletal dan merupakan faktor prognostik baru. Sarkopenia penyakit hati akibat kegagalan intake nutrisi dan malabsorpsi, hipermetabolik, defisiensi testosterone, hilangnya masa otot dan kegagalan pertumbuhan otot. Sarkopenia pada KHS disebut *cachexia* mengakibatkan respon inflamasi sistemik yang mempengaruhi survival.

Tujuan: Menganalisis hubungan antara sarkopenia dan mortalitas pada pasien karsinoma hepatoseluler setelah TACE pertama.

Materi dan Metode: Penelitian observasional analitik *Case Control*, 36 subyek KHS - TACE pertama 1 maret 2018 - 31 Mei 2020 di Rumah Sakit Dr. Soetomo - Surabaya. Diagnosis KHS melalui kriteria PPHI 2017. Sarkopenia didiagnosis dengan SMI melalui CT scan VL 3 atau 4, pria $\leq 52,4 \text{ cm}^2/\text{m}^2$ dan wanita $\leq 38,5 \text{ cm}^2/\text{m}^2$.

Hasil: Dari 36 subyek penelitian, 27 (75%) pria dan 9 (25%) perempuan, usia antara 23 - 59 tahun. Terdapat 14 (77,8%) pria dan 4 (22,2%) wanita mengalami sarkopenia. Terdapat 11 (68,8%) subjek sarkopenia dan 5 (31,3%) subjek tanpa sarkopenia meninggal setelah TACE pertama. Terdapat hubungan antara sarkopenia dan kejadian mortalitas pada pasien KHS setelah TACE pertama ($p=0,044$). Subjek KHS dengan sarkopenia memiliki kecenderungan meninggal 4,08 kali lipat (IK 95%;1,07-16,57) setelah TACE pertama dengan *power of analysis* sebesar 83,1%.

Kesimpulan: Sarkopenia merupakan salah satu faktor yang berhubungan dengan mortalitas pasien KHS setelah TACE pertama.

Kata Kunci: Sarkopenia, SMI, TACE, KHS, Mortalitas

ABSTRACT

Correlation Between Sarcopenia and Mortality In Hepatocellular Carcinoma Patients After Initial Transarterial Chemoembolization

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Background: Hepatocellular carcinoma (HCC) is liver primary cancer which becomes a health problem in the world. Transarterial chemoembolization (TACE) is recommended in HCC intermediate. HCC mortality due to insulin resistance, vitamin D deficiency, increased inflammation cytokine and sarcopenia. Sarcopenia is the loss of muscle mass and a new prognostic factor. HCC sarcopenia due to malabsorption and low nutrition, hypermetabolic, testosterone deficiency, loss of muscle mass and failure of muscle growth. HCC sarcopenia is cachexia, relate to systemic inflammatory response that influences survival.

Objective: To analysis correlation between sarcopenia and mortality in HCC patients after initial TACE

Material and Methods: This is a case control observational study, 36 subjects of HCC after initial TACE from March 1st 2018 till May 31st 2020 in Dr. Soetomo General Hospital. HCC was diagnosed by the PPHI consensus 2017. Sarcopenia was diagnosed with SMI by CT scan abdominal VL 3-4, for male $\leq 52,4 \text{ cm}^2 / \text{m}^2$ and female $\leq 38,5 \text{ cm}^2 / \text{m}^2$.

Results: Of the 36 subjects, 27 (75%) male and 9 (25%) female, within 23 – 59 years. Sarcopenia in 14 (77,8%) male and 4 (22,2%) female. 11 (68,8%) sarcopenia and 5 (31,3%) non-sarkopenia were dead after initial TACE. There is a correlation between sarcopenia and mortality in HCC after initial TACE ($p=0,044$). HCC with sarcopenia has preference 4.08 times (CI 95%;1.07-16.57) after initial TACE with the power of analysis is 83.1%.

Conclusion: Sarcopenia is one of the factors that relate to mortality in HCC after initial TACE.

Keywords : Sarcopenia, SMI, TACE, HCC, Mortality.