

ABSTRAK

Pendahuluan : Kolangiokarsinoma merupakan tumor tersering kedua pada hepar, sering terlambat terdiagnosis dan memiliki prognosis yang buruk. Modalitas pemeriksaan penanda tumor CA19-9, CEA dan pencitraan radiologi CT-Scan/MRCP dapat membantu diagnosis dan penilaian prognosis kolangiokarsinoma. Pembedahan merupakan terapi utama kolangiokarsinoma, akan tetapi pembedahan tidak dapat dilakukan pada tumor tahap lanjut. Kondisi ini disebut *unresectable* kolangiokarsinoma. Hal tersebut berdampak pada penurunan kesintasan hidup pasien kolangiokarsinoma. Peningkatan ukuran tumor dan kadar penanda tumor diketahui berkaitan dengan prognosis kolangiokarsinoma yang lebih buruk. Oleh karena itu diperlukan sebuah penelitian untuk menilai peran penilaian ukuran tumor berdasarkan pencitraan radiologis, serta kadar penanda tumor CA19-9 dan CEA dalam menilai kesintasan pasien *unresectable* kolangiokarsinoma. **Metode :** Penelitian ini adalah penelitian observasional kohort retrospektif di RSUP Dr. Sardjito Yogyakarta selama 5 tahun, yaitu Januari 2015 – Desember 2020. Populasi penelitian adalah pasien kolangiokarsinoma RSUP Dr. Sardjito dalam periode penelitian yang memenuhi kriteria inklusi dan eksklusi. Variabel yang diamati adalah kadar CA19-9, CEA, ukuran tumor berdasarkan pencitraan CT-Scan / MRCP, dan kesintasan pasien *unresectable* kolangiokarsinoma. Data dengan distribusi normal akan dilakukan uji T dan regresi linear, sedangkan analisa kesintasan dengan uji Kaplan Meier. Penilaian hazard ratio dalam uji univariat dan multivariat dilakukan dengan model regresi Cox. Derajat kepercayaan sebesar 95%. Analisa data menggunakan SPSS edisi 23. **Hasil :** Terdapat 57 subjek dalam penelitian ini, dengan tampakan histologi pada 40 subjek terdiferensiasi buruk dan 17 subjek terdiferensiasi baik. Tidak tampak beda bermakna rerata usia, sebaran jenis kelamin, lokasi tumor, derajat TNM, kadar bilirubin, albumin, SGOT, SGPT, AFP, CEA dan CA19-9 antara kedua kelompok. Persebaran metastasis organ menunjukkan distribusi homogen, kecuali metastasis lien yang secara bermakna lebih banyak terjadi pada kelompok terdiferensiasi buruk (25,0% vs 0,0%, $p = 0,023$). Median durasi follow up adalah 5,5 bulan. Pada kelompok luaran meninggal dunia ditemukan rerata ukuran tumor 578,2 cm³ dengan 67,27% subjek menderita metastasis. Metastasis terbanyak pada kelompok meninggal dunia terjadi pada organ hepar (54,5%). Uji regresi linear menunjukkan hanya kadar CA19-9 yang memiliki pengaruh negative bermakna terhadap kesintasan *unresectable cholangiocarcinoma* ($r^2 -0,003$, $p = 0,027$). Kelompok luaran meninggal dunia ditemukan memiliki proporsi populasi dengan peningkatan CA19-9 yang secara bermakna lebih tinggi dibandingkan dengan kelompok hidup (96,3% vs 33,3%, $p < 0,001$). Tidak terdapat beda ukuran tumor dan kadar CEA yang bermakna antara kelompok hidup dan meninggal dunia. Analisa kesintasan Kaplan Meier menunjukkan peningkatan kadar CA19-9 memiliki dampak bermakna terhadap penurunan kesintasan *unresectable* kolangiokarsinoma ($p = 0,010$). Analisa regresi Cox menunjukkan kelompok tanpa peningkatan CA 19-9 memiliki kesintasan hidup yang lebih baik (HR 0,198, 95%CI 0,047 – 0,836, $p = 0,028$). **Kesimpulan :** Peningkatan kadar CA19-9 memiliki hubungan bermakna dengan penurunan kesintasan pasien *unresectable* kolangiokarsinoma. CEA dan ukuran tumor tidak mempengaruhi *overall survival unresectable cholangiocarcinoma*.

Kata kunci : *unresectable* kolangiokarsinoma, CA19-9, CEA, CT-Scan, MRCP

ABSTRACT

Introduction : Cholangiocarcinoma is the second most common tumor of the liver, often diagnosed late and had poor prognosis. The examination of tumor markers CA19-9, CEA and CT-Scan/MRCP imaging help assess the diagnose and prognosis of cholangiocarcinoma. Surgery is the mainstay therapy for cholangiocarcinoma, but it cannot be performed on advanced tumors. This condition is called unresectable cholangiocarcinoma, it has massive impact on decreased overall survival of cholangiocarcinoma patients. Increased tumor size and elevated tumor markers are associated with a poorer prognosis. Therefore, a study is needed to examined the role of tumor size evaluation based on radiological imaging, as well as elevated tumor markers CA19-9 and CEA in assessing the overall survival of patients with unresectable cholangiocarcinoma. **Methods :** This study was a retrospective cohort observational study at RSUP Dr. Sardjito Yogyakarta that lasted 5 years, between January 2015 – December 2020. This study population was cholangiocarcinoma patients at RSUP Dr. Sardjito enrolled in the research period according to the inclusion and exclusion criteria. The variables observed were CA19-9 level, CEA level, tumor size based on CT-Scan / MRCP imaging, and overall survival of unresectable cholangiocarcinoma patients. Data with normal distribution analyzed with T test and linear regression, while survival analysis carried out by Kaplan Meier test. The hazard ratio assessment was carried out using the Cox regression model. The degree of confidence was 95%. Data analyzed with SPSS 23rd edition. **Results :** There were 57 subjects included, with histological appearances distributed as 40 poorly differentiated subjects and 17 well differentiated subjects. There was no significant difference in mean age, sex distribution, tumor location, TNM grading, bilirubin, albumin, SGOT, SGPT, AFP, CEA and CA19-9 levels between the two groups. The distribution of organ metastases showed a homogeneous distribution, except for splenic metastases which were significantly more prevalent in the poorly differentiated group (25.0% vs. 0.0%, $p = 0.023$). The median duration of follow-up was 5.5 months. In the death group, the average tumor size was 578.2 cm³ with 67.27% of the subjects suffered from metastases. Most of the metastases in the death group occurred in the liver (54.5%). The linear regression test showed only CA19-9 levels had a significant negative association on the overall survival of unresectable cholangiocarcinoma ($r^2 -0.003$, $p = 0.027$). The death group had significantly higher proportion of increased CA19-9 populations compared to the living group (96.3% vs. 33.3%, $p < 0.001$). There was no significant difference in tumor size and CEA levels between the living and death groups. Kaplan Meier survival analysis showed that increased CA19-9 levels had a significant impact on decreased overall survival of unresectable cholangiocarcinoma ($p = 0.010$). Cox regression analysis showed that unelevated CA 19-9 group had better overall survival (HR 0,198, 95%CI 0,047 – 0,836, $p = 0,028$). **Conclusion :** Increased CA19-9 level, but not CEA nor tumor size by CT-Scan/MRCP examination, had significant association with decreased overall survival of unresectable cholangiocarcinoma.

Keywords: *unresectable cholangiocarcinoma*, CA19-9, CEA, CT-Scan, MRCP