AB060. P-31. Complete response to immunotherapy in cholangiocarcinoma with peritoneal metastases and high PD-L1 expression: a case report

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Background: In the biliary tract cancer (BTC) cohort of KEYNOTE-158, which enrolled 104 patients with advanced BTC who had progression/intolerance to standard therapy, showed 6.6% overall response rate in the subgroup of programmed death-ligand 1 (PD-L1) combined positive score (CPS) ≥1 but the median progression-free survival (PFS) and overall survival (OS) were only 1.9 and 7.2 months, respectively (2018 ESMO). Of note, two patients had duration of response more than 15 months, which suggested immunotherapy might have antitumor activity in a subset of advanced BTC. Herein, we report an experience of complete response after immunotherapy in a patient of cholangiocarcinoma with obvious peritoneal metastases.

Methods: A 60-year-old male with stage IIIA hilar cholangiocarcinoma received treatment in National Cheng Kung University Hospital. Clinical characteristics are reviewed through the electronic medical records. Tumor response is evaluated by CT scan via RECIST 1.1. PD-L1 expression is evaluated through the Dako 22C3 PD-L1-IHC platform.

Results: Patient underwent curative extended right lobectomy in December 2016 with initial CA19-9 409.9 IU/mL. After surgery, CA19-9 decreased to 19.8 IU/mL. A half year later, CA19-9 increased to 46.3 IU/mL without CT evidence of tumor recurrence. Chemotherapy with gemcitabine and cisplatin was given. Two months later, CA19-9 increased to 657.9 IU/mL and CT scan showed peritoneal seeding. Despite the change of chemotherapy to S-1, leucovorin, oxaliplatin and gemcitabine (SLOG), follow-up CT scan 3 months later showed progression of peritoneal tumors with CA19-9 increased to 4,739 IU/mL. Biopsy of the metastatic tumor showed high PD-L1 expression (90%) on the tumor cells. Salvage immunotherapy pembrolizumab (fixed dose 100 mg, approximately equal to 1.5 mg/kg, every 3–4 weeks) has been given since December 2017. After three doses of pembrolizumab, CT scan showed complete regression of the peritoneal tumors with drastic decline of CA19-9 to 33.7 IU/mL. The patient received a total of seven doses of pembrolizumab and stopped due to financial issue. To date, 13 months after the beginning of immunotherapy, the patient is still alive without evidence of cholangiocarcinoma recurrence.

Conclusions: Our experience suggested immunotherapy may have durable antitumor activity for cholangiocarcinoma with extremely high PD-L1 expression. Underlying mechanism caused such high PD-L1 expression and incredible response to immunotherapy remains unclear and further investigation is warranted.

Keywords: Metastatic cholangiocarcinoma; immunotherapy; programmed death-ligand 1 (PD-L1)

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