Cap-Tem-Y90 for Grade 2 Liver-dominant Net Metastases

Michael C. Soulen, Jennifer Eads, Ursina Teitelbaum, Nevena Damjanov, Charles Schneider
Abramson Cancer Center, Philadelphia, PA

BACKGROUND: Grade 2 NET liver metastases have less durable PFS than low-grade tumors following embolotherapy (12 mo vs. 18 mo, Chen 2017). Capecitabine-Temozolomide (CapTem) is an effective regimen in NETs and both drugs are radiosensitizers. A feasibility study of integrated CapTem and Y90 transarterial radioembolization (TARE) demonstrated tolerability with expected additive toxicities and encouraging ORR and PFS. This study expands that report to a larger cohort with oncologic follow-up.

METHODS: Initial therapy consisted of capecitabine 600 mg/m2 twice daily for 14 days and temozolomide 150-200 mg/m2 in two divided doses on day 10-14, with 14 days between cycles. During the initial cycle of chemotherapy, the patient underwent simulation angiography with Tc99m-MAA SPECT. Once deemed to be eligible for radioembolization, the dominant lobe was treated on day 7 of the second cycle of CapTem. Resin Y90 microspheres (SIR-Spheres; Sirtex Medical) were administered according to the body surface area method. Patients with bilobar disease had the other lobe was treated on day 7 of the third or fourth cycle. CapTem was continued until progression or intolerance. Imaging was performed every 3 months.

RESULTS: 35/37 patients completed the prescribed regimen. Two patients did not receive a planned second lobar TARE due to post-embolization toxicities. Primary sites of disease were pancreas (16), lung (10), gut (7) and unknown (4). Mean duration of CapTem was 11 months (range, 4-32 mo). >G2 toxicities included cytopenias (8), pain (2), hepatic (2), fatigue (1), vomiting (1). ORR was 62%. Median hepatic-PFS was 26 mo. Differences in PFS among primary sites were not significant. 19 patients have died, with median OS from diagnosis not reached and 38 mo from treatment.
CONCLUSION: Radiosensitization with CapTem during TARE is tolerable and provided durable control of liver metastases substantially longer than historical expectations for embolotherapy alone in this single-institution cohort.

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