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Chemo-saturation with Percutaneous Hepatic Perfusion (CS:PHP) using Melphalan for Unresectable Neuroendocrine Tumor Liver Metastases (MNET)

Type: Late Breaking Abstract

Topic: Oncologic intervention

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Purpose

Options for pts with unresectable NET liver metastases are few; response to medical/focal therapies is limited. CS:PHP could improve outcomes.

Material and Methods

CS:PHP with high-dose melphalan was administered into the hepatic artery with simultaneous extracorporeal hemofiltration of hepatic venous effluent with blood return via internal jugular vein. Patients received ≤4 cycles of melphalan (2.5-3.0mg/kg) q4-5 weeks in 2 NCI-IRB-approved studies. Patients had MNET, limited treatable extra-hepatic disease, adequate hepatic reserve, no portal hypertension, adequate vascular access. Primary objective was response rate; others: peri-procedural events, AEs and PFS.

Results

23 patients had median 15 lesions; 9 minimal extra-hepatic disease, majority pancreatic MNET (n=17). Liver tumor involvement was <25% in 12 patients, 25-50% in 5, >50% in 6. Median cycles were 3/patient, total 68; median dose 180mg (126-220). 1 pt received 4 cycles plus three upon progression 4 years later. Acute procedure-related G3-4 labs were transaminitis (22% cycles), thrombocytopenia (21%), anemia (16%) and hyperbilirubinemia (9% cycles). One patient experienced tumor lysis, 1 carcinoid crisis and 1 CNS hemorrhage. Later grade 3-4 AEs were mainly hematological: neutropenia (47% cycles), thrombocytopenia (29%) and anemia (15%). The 1 treatment-related death was due to cholangitis (day 74). Response was 79% in 19 evaluable patients (2 CR, 13 PR). Median hepatic PFS was 39 months (n=20).

Conclusion

CS:PHP with melphalan has efficacy in pts with MNET liver metastases too extensive for other strategies. Response is long-lasting, with 39-month PFS and possibility of re-treatment upon progression. This promising novel therapy offers interventional radiologists a new tool and a central role in patient management.

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