

## **Chemosaturation with Percutaneous Hepatic Perfusions (CS-PHP): Utilization of Vasopressors, Nitroglycerin, and Pre-embolization**

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**Aims:** CS-PHP allows infusion of cytotoxic drugs into the hepatic artery by isolating the liver from the systemic circulation. Extracorporeal filtration of hepatic venous blood removes residual drug and endogenous catecholamines, necessitating exogenous vasopressor support. Pre-embolization of adjacent gastrointestinal arterial branches prevents inadvertent drug reflux into non-target vessels. We report on prophylactic embolization and pressor support from a randomized phase 3 trial of CS-PHP-melphalan vs best alternative care in patients (pts) with unresectable hepatic metastases from melanoma.

**Materials and methods:** Pts received up to 6 cycles of CS-PHP under general anaesthesia with standard interventional radiology techniques (4–6w intervals). Pts underwent hemodynamic monitoring and received IV fluids/ephedrine to control intra-procedural hypotension and nitroglycerin to manage hepatic arterial spasm.

**Results:** 70 pts (available data 68 pts) underwent 188 procedures. Blood pressure (BP) drop was seen in 139/182 of procedures (76%): treatment-day median systolic BP was 65mmHg and 126mmHg on day 3 post CS-PHP; corresponding values for median diastolic BP were 40mmHg and 69 mmHg, respectively. The median periprocedural nadir for mean arterial pressure was 49mmHg. Arterial spasm occurred in 79/171 (46%) procedures, requiring nitroglycerin (median dose 200µg) in 92/188 (49%) procedures. Fifty pts (74%) required embolization, performed before cycle 1 (n=47); targets were gastroduodenal artery (n=42), right gastric artery (n=5), and other (n=3).

**Conclusions:** BP management is essential to avoid hemodynamic instability during CS-PHP. Hepatic arterial mapping with pre-embolization and relief of intra-procedural hepatic arterial spasm are important for avoiding retrograde reflux of infusate and local adverse events.

**Key words:** hepatic perfusion; embolization; vasopressor; nitroglycerin

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