Chemosaturation with Percutaneous Hepatic Perfusions: Vasopressor, Nitroglycerin, and Pre-embolization Requirements

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Background: Chemosaturation with Percutaneous Hepatic Perfusions (CS-PHP), a novel therapy for unresectable hepatic tumors, allows direct infusion of cytotoxic drugs into the hepatic artery by isolating the liver from the systemic circulation. Hepatic venous blood is filtered extra-corporeally removing residual drug before it is returned the body. Filtration removes endogenous cathecholamines necessitating exogenous vasopressor support (norepinephrine), which may result in hepatic vasospasm (relieved by IA nitroglycerin, NTG). Pre-embolization of gastrointestinal (GI) arterial branches avoids inadvertent drug reflux into non-target vessels. **Methods:** We report on the usage of pre-embolization, vasopressors and NTG from a Phase 3 randomized trial of CS-PHP using melphalan (2-3 cycles, at 4–6 week intervals). **Results:** A total of 70 pts (available data, AD, on 68) underwent 188 procedures (safety population). Blood pressure (BP) drop (see table) was observed in 139 of 182 (76%) of procedures (with AD), and vasopressor support was required in 137 (75%). Arterial spasm occurred in 79 of 171 (46%) of procedures (with AD). Nitroglycerin (median dose: 200 μg) was given in 92 of 188 (49%) procedures. Fifty pts (74%) required embolization and 18 pts (26%) did not. Most embolizations were performed before cycle 1 (n=47); targets were gastroduodenal artery (n=42), right gastric artery (n=5) or other (n=3). **Conclusions:** Blood pressure management is essential to avoid hemodynamic instability during CS-PHP. Hepatic arterial mapping with embolization is an important preparatory step for avoiding reflux from vasopressor-related spasm.

	Peri-procedure[a]		Post-procedure[b]	
	N	**Median (range), mmHg**	**N**	**Median (range), mmHg**
Systolic blood pressure	64	65 (35–140)	4	126 (100–154)
Diastolic blood pressure	64	40	4	69 (66–77)
Mean arterial blood pressure	65	49	–	–

[a]Day of treatment.

[b]Day 3 post-CS-PHP to cycle end.

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