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Program: General Surgery

Type: Original Research

Background: HIPEC with cisplatin in recurrent and advanced ovarian cancer (AOC) improves survival, but renal toxicity is common, even with renal protectants. Carboplatin intravenous (IV) and intraperitoneal (IP) have significantly less nephrotoxicity with comparable efficacy. This study reports the safety and efficacy of carboplatin HIPEC for recurrent and AOC.

Methods: Retrospective analysis of a cytoreductive surgery (CRS) /HIPEC registry was performed on recurrent and AOC patients treated between 2012-2018 with and without HIPEC. HIPEC with carboplatin (600-800 mg/mM2) was delivered for 90 minutes at 41-42 C. Peritoneal Cancer Index (PCI), Completeness of Cytoreduction (CC)-score, nephrotoxicity by RIFLE score, thrombocytopenia, pancytopenia, length of stay (LOS), progression free survival (PFS), overall survival (OS), peritoneal relapse and all relapse events were collected and compared from the date of surgery.

Results: A total of 34 recurrent and AOC patients had CRS, 21 treated with HIPEC. Mean PCI for CRS and CRS/HIPEC was 23 and 22 respectively. 95% HIPEC and 100% no HIPEC had R0/R1/R2a. 9% developed >grade 1 AKI. Thrombocytopenia (platelet < 75K) occurred in 23% of HIPEC patients. LOS was 9.5 days for both groups. Post-CRS OS was 15 vs. 56 months for CRS vs. CRS/HIPEC, p<0.01. There was no difference in median OS in HIPEC group treated at recurrence or first CRS. Peritoneal recurrence was 69% for CRS vs 19% for CRS/HIPEC, p<0.01.

Conclusion: This data demonstrates that Carboplatin HIPEC has similar efficacy to cisplatin without the nephrotoxicity. Carboplatin HIPEC for recurrent and AOC is safe and efficacious. The survival benefit may be attributable to peritoneal disease control and peritoneal relapse free survival may be a viable endpoint in future HIPEC clinical trials. ■

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Table 1.

Hyperthermic Intraperitoneal Chemotherapy (HIPEC) group demonstrates increased overall survival (OS), reduced rate of peritoneal relapse, and similar overall relapse rate when compared with non-HIPEC group. Upfront HIPEC is associated with lower peritoneal relapse rate when compared with HIPEC performed after disease recurrence.

GROUP	#	OSCRS months	DOD (n=34)	NED (n=34)	PERITONEAL RELAPSE	ANY RELAPSE
ALL	34	**34**	-	-	**-**	-
No HIPEC	13	**20**	73%	0%	**69%**	87%
HIPEC	21	**56**	42%	38%	**19%**	79%
$HIPEC_{recurrent}$	9	**56**	33%	15%	**33%**	92%
$HIPEC_{upfront}$	12	**56**	23%	58%	**8%**	67%

Exploring Head and Neck (H&N) Melanoma Sentinel Lymph Node (SLN) Outcome Compliance With Multicenter Selective Lymphadenectomy Trials (MSLT) Predicted Outcome

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Background: MSLT established SLN management in extremity/trunk melanoma, demonstrating a 16% positive SLN (+SLN) rate and 14% positive non-SLN rate (+NSLN) in Complete Lymph Node Dissection (CLND). CLND improved Disease Specific Survival (DSS) without Overall Survival (OS) benefit. Results of MSLT guide H&N melanoma but H&N only represented 13% of patients in MSLT II. This project explored the validity of observations reported in MSLT II in H&N melanoma.

Methods: Retrospective H&N melanoma population treated 2005-2019. 124 ≥T1b with SLN injection and 108 SLN dissections were performed. Complication rates, T-stage, rates of +SLN, +NSLN in CLND were calculated, as well as death due to disease (DOD), progression free survival (PFS), along with rates of local (LR), nodal (LNR), and systemic (SR) recurrence.

Results: T-stage was 41% IB, 23% IIA, 28% IIB, 8% IIC. Nerve complication was 4% for SLN and 11% for CLND. – SLN group survival is 93% compare to survival of 70% for +SLN group with median follow-up of 40 months. Rate of +SLN was 29% and +NSLN rate for CLND was 50%. Patients with positive SLN but did not undergo CLND (+SLNBx only) has surprisingly lower rate of LR, LNR, SR, and DOD when compared to patients with positive SLN who underwent CLND (CLND group). (Table 1.)

Conclusion: +SLN rate was 2-fold higher and +NSLN following CLND was 3-fold higher in H&N melanoma. Local regional recurrence rates were higher for CLND compared to SLNB+ only. These results support nodal