

Implementation of a Standardized Premedication Protocol for Prophylaxis of Carboplatin Hypersensitivity

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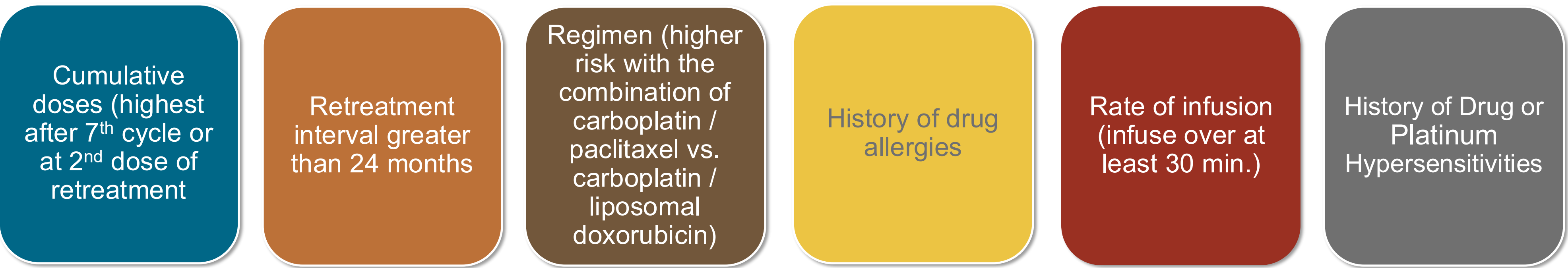


Background

- ❖ Despite its widespread implementation and understanding of associated toxicities, carboplatin therapy is associated with a significant risk of hypersensitivity reactions (HSRs), which can range from mild rash to life-threatening anaphylaxis.
- ❖ The incidence of these reactions increases with cumulative exposure, peaking after the 7th cycle or during retreatment.
- ❖ This topic is pertinent in gynecologic cancers such as ovarian and endometrial cancers where platinum doublet therapy remains the standard of care in patients with platinum-sensitive disease.



Risk Factors for Carboplatin Hypersensitivity

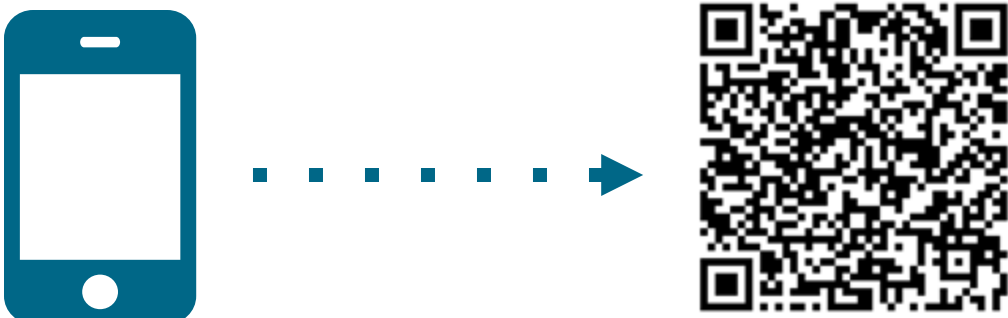


Discussion

- ❖ The results of this study demonstrate the feasibility and potential effectiveness of a standardized premedication approach in reducing carboplatin HSRs.
- ❖ The Texas Oncology (TXO) Premedication Protocol proved a statistically significant benefit in reducing Carboplatin HSRs in comparison to institutional standard practice.
- ❖ Additionally, the TXO Premedication Protocol can act as a proactive measure for reducing carboplatin HSRs in comparison to Desensitization Protocols which target only patients with a history of Carboplatin HSRs.
- ❖ Furthermore, the TXO Premedication Protocol provides less workflow burden in comparison to Desensitization and Carboplatin Skin Testing.

Methods

- ❖ An Electronic Medical Record (EMR) audit of patients that had received 7 or more lifetime doses of carboplatin at AUC 4 and higher.
 - Pre-intervention group: January 2024 to July 2024
 - Post-intervention group: October 2024 to December 2024
 - Three Subgroups:
 - Extended Infusion & IV Premedication
 - Standard Infusion and IV Premedication
 - Standard Infusion and Oral Premedication



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Patient Demographic Information

	Pre-Intervention	Post-Intervention
Age	67.0 (31-84)	72.0 (40-91)
Race		
Caucasian	50 (71.4%)	43 (71.7%)
Black or African American	6 (8.6%)	7 (11.7%)
Asian	3 (4.3%)	1 (1.7%)
Latino	11 (15.7%)	9 (15%)
Cancer Diagnosis		
Endometrial	7 (10%)	19 (31.7%)
Ovarian	34 (48.6%)	30 (50%)
Peritoneal	5 (7.1%)	5 (8.3%)
Uterine or Cervical	12 (17.1%)	4 (6.7%)
Vaginal or Vulvar	3 (4.3%)	2 (3.3%)

Incidence of Carboplatin Hypersensitivity between pre- and post-intervention Populations

	Pre-Intervention	Post-Intervention
Carboplatin Hypersensitivity Incidence		
Number of Infusions	70	60
Hypersensitivity Incidence	9 (12.9%)	1 (1.7%)
Chi-Squared Analysis (p-value < 0.05)		
Significance Level	p-value = 0.0397	
Odds Ratio	0.1149	
Confidence Interval (95%)	0.0141 to 0.9351	
Logistic Regression Model (p-value < 0.05)		
Significance Level	p-value = 0.0431	

Conclusions

- ❖ The TXO premedication protocol offers a proactive approach that can be integrated into existing workflows without significant additional burden to staff or patients.
- ❖ The establishment of a standardized protocol addresses a critical gap in current practice.
- ❖ By providing a consistent and evidence-based approach, healthcare providers can better ensure that patients receive optimal treatment with carboplatin without unnecessary interruptions due to HSRs.

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